APRIL 1941

THE ARCHITECTURAL FORUM

81 NEW HOUSES

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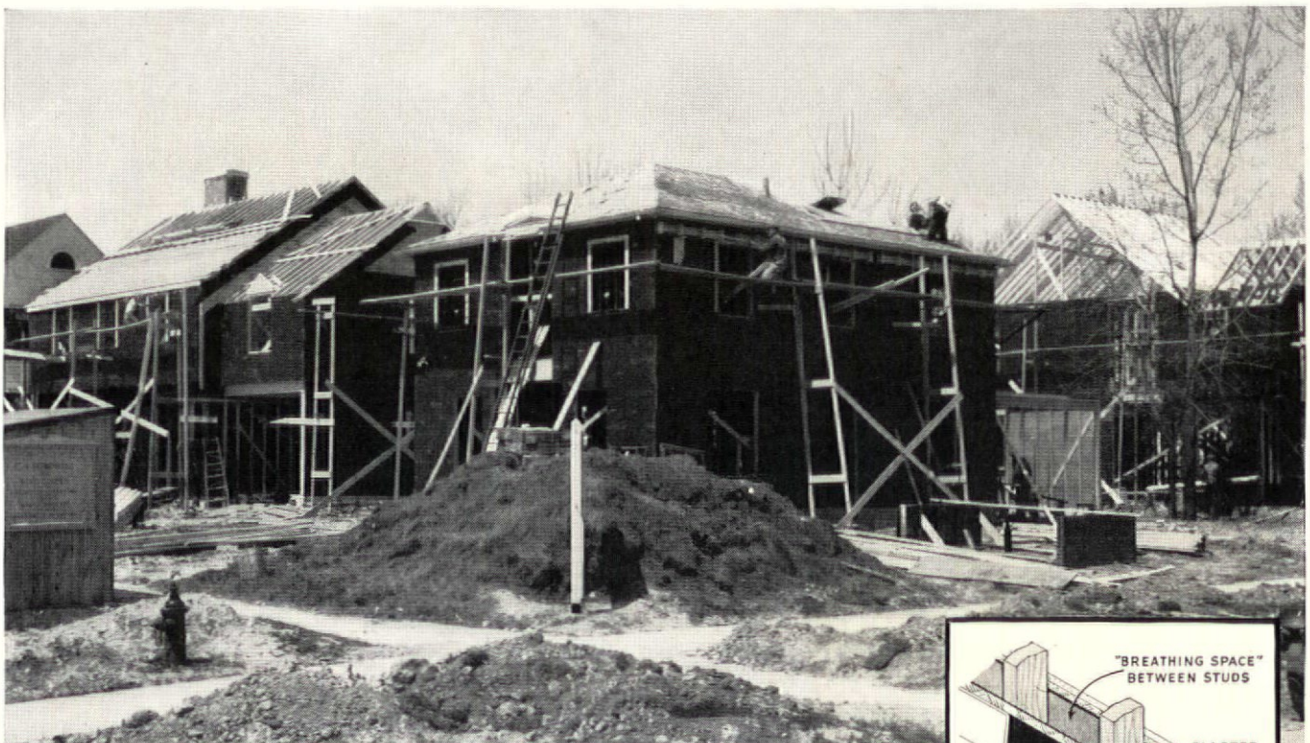
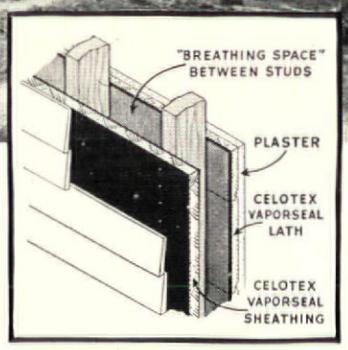
MORE FOR THEIR MONEY

WITH CELOTEX GUARANTEED INSULATION





Wilmette, Ill. C. A. Hemphill & Associates, Builders; R. F. Houlihan, Architect

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ARCHITECTURAL FORUM

APRIL 1941

HOUSES 217

A nationwide survey of new houses, illustrating the most recent trends in planning and design, with emphasis on the growing tendency toward distinct regional expressions. The 81 examples with their price range of $2,000 to $15,000 cover the broadest U. S. residential building market. Documented case histories show modern and traditional types, materials ranging from adobe to the latest in synthetics and plans for diverse budgets and living requirements.

BUILDING FOR DEFENSE 10

Headway and Headaches—the Army stocks reserve lumber for future reference . . . A private realtor makes a $200,000 commission on an Army real estate deal . . . ARP comes to U. S. . . . First formal priorities affect the building industry via ice cube trays . . . Another construction trouble-shooter is called to the War Department . . . $150 million for defense utilities . . . Prefabrication gets a break . . . And the Defense Housing program gains momentum.

A prefabricated demountable house—Portland, Ore. puts one on a truck, delivers it f.o.b. your lot for $1,800 complete.

Airplane pilot training center—one of many similar defense projects, but better than average—The Ryan School of Aeronautics in California's Hemet Valley.

What is wrong with the Defense Housing program and how it may be corrected—by Dr. Edith Elmer Wood.

MONTH IN BUILDING 2

BOOKS 36

Airports . . . Epstein . . . Plantation Houses . . . Wood finishing . . . Design of roof trusses.

LETTERS 44

Editor, Howard Myers; *Managing Editor*, Ruth Goodhue; *Associates*, Paul Grotz, Joseph C. Hazen, Jr., C. Theodore Larson, George Nelson, Henry H. Saylor, Henry Wright; *Assistants*, John Beinert, Anna De Cormis, Richard E. Saunders, Madelaine Thatcher, Nadia Williams. THE ARCHITECTURAL FORUM is published by Time Inc., Henry R. Luce, Chairman; Roy E. Larsen, President; Charles L. Stillman, Vice President and Treasurer; Howard Black, Allen Grover, Eric Hodgins, P. I. Prentice, Vice Presidents; David W. Brumbaugh, Secretary. Publication and Subscription Office, Orange, Conn. Subscriptions may also be sent to 330 East 22nd Street, Chicago, Illinois. Executive; Editorial and Advertising Offices, Time & Life Building, Rockefeller Center, New York. Business Manager, H. A. Richter. Advertising Manager, George P. Shutt. Address all editorial correspondence to Time & Life Building, Rockefeller Center, New York. Yearly subscription, payable in advance, U. S. and Possessions, Canada, Cuba, Mexico, South America, $4.00. Elsewhere $6.00. Single issues, including Reference Numbers, $1.00. All copies Mailed Flat.

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VOLUME 74—NUMBER FOUR

THE MONTH IN BUILDING

TRENDS

Since many permits for defense-inspired factories run into the millions, the non-residential building curve is extremely erratic. During January it dipped 59 per cent, pulled the total volume of permits down 34 per cent. But, all classifications of construction were well up over the levels of January 1940 (see tabulation, right). Residential construction continued to advance in February, when the volume of small house contracts awarded totaled $90.8 million, up 59 per cent from the February 1940 level, to the biggest February total since 1928. Despite the huge Government defense housing program, more than 80 per cent of the February residential total was privately financed. Wholesale material costs in January advanced only slightly, a moderate drop in lumber prices having partially offset increases in brick and paint prices.

PERMITS

(Source: U. S. Dept. of Labor)

	Jan. 1941 (millions)	Comparison with Dec. '40	Comparison with Jan '40
Residential	$92.6	— 4%	+48%
Non-residential	62.0	—59	+86
Additions, Repairs	23.6	+ 9	+16
TOTAL	178.2	—34	+53

TYPICAL BUILDING

More interesting than informative is the latest statistical study of the National Assn. of Building Owners and Managers which wound up with the geometric and financial dimensions of the average U. S. office building: height, fourteen stories; rentable area, 140,000 sq. ft.; age, 22 years; annual income, $206,780; annual operating and maintenance expense, $160,-020.

As a yardstick, NABOM's findings will be little used, for no two office buildings are identical and, chances are that the average building does not actually exist. But, compared with similar statistics gathered for the transitional prosperity-depression year of 1930, they offer several meaty facts. Thus, since the average building's income dropped 35 per cent during the decade from $316,540 and expenses dropped only about 15 per cent from $185,080, it is apparent that tenants are getting considerably more for their rental dollars than they did in 1930. Conversely, although they have been able to effect important operating and maintenance economies, landlords are making substantially less.

Total direct operating expenses of the average building come to $73,500 a year of which cleaning costs account for about 33 per cent, heating about 11 per cent, elevator operation about 20 per cent. Maintenance costs, alterations, etc., involve a yearly expenditure of $13,020; property taxes, $34,720; other expenses, $38,780. All major expense items have been shaved during the past decade.

While about 77 per cent of the income of the average building goes for operation, NABOM has discovered that the operating ratio for a group of higher buildings (averaging 31.6 stories) is 89 per cent, for a group of lower buildings (averaging 10.4 stories) 79 per cent. Apparently, the average (fourteen-story) building is the most economical.

MILESTONE

Handling a continually increasing share of a continually increasing business, the Federal Housing Administration sped past a milestone at February's end. Applications for FHA insurance of home mortgages since FHA's establishment in 1935 have topped the $5 billion mark. Since applications must be processed and, in many cases, refused, the volume of FHA insurance actually in force is considerably below this level. On February 28, it amounted to about $4.2 billion of which home mortgages accounted for $2.8 billion, property improvement and modernization loans $1.3 billion and rental housing project mortgages $129 million.

The average weekly volume of new house construction begun under FHA inspection during February was 2,413 units, compared with 2,397 in January and 2,035 in February 1940.

FOUNDATIONS UP

One of Building's top-notch contractors recently and without fanfare moved up another notch: Famed Foundation Expert George J. Atwell is now President of New York City's Thompson-Starrett Co., Inc. general contractors. Some 40 years ago Atwell enjoyed the dubious honor of being fired from his insurance company job by Efficiency Expert Charles Evans Hughes, and he has been in the foundation construction business ever since, and with increasing success. Today, the work of the George J. Atwell Foundation Corp.—very much alive despite the new post of its president and director—is holding up many New York City landmarks, including the U. S. Post Office, International Telephone and Telegraph Building, U. S. Court House, New York Life Insurance Co. Building and, biggest of all, Rockefeller Center. While the latter project was going up, Atwell, mindful of public curiosity, set up a booth to shelter kibitzers while they watched the progress of his labor, decorated it with the Dutch motto: "De Beste Stuurlui Staan aan Wal" ("The best pilots stand on the shore"). His reward: honorary presidency of the "Sidewalk Superintendents Club" whose open membership quickly swelled to some 10,000 excavation gapers.

Contractor George J. Atwell

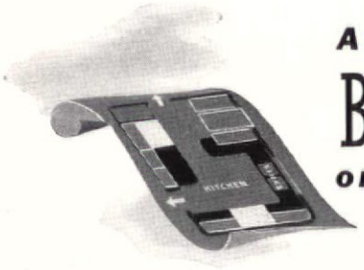
Heavy-set, gruff-voiced and white-haired, Contractor Atwell is prominent in many fields—on the turf as a horseman and a director of the National Horseshow Assn., in transportation as a director of the New York Omnibus Corp. which last month made news as the victim of a CIO strike, in politics as past president of the National Democratic Club, in finance as director and trustee of the Prudence Securities Corp. and, finally, in insurance as a member of the advisory board of the American Mutual Liability Insurance Co. He once headed the local General Contractors Assn.

As president of Thompson-Starrett, Big Builder Atwell is in charge of all its new contracts, most of which are for defense projects. Last month the company was qualifying for $32 million worth of dry-dock and improvement work at the local Navy Yard and was negotiating for other sizable contracts at the Norfolk (Va.) and Mobile (Ala.) Navy Yards.

TRUST BUSTING

Recovering from a serious setback on the building labor front (ARCH. FORUM, Mar. 1941, p. 2) Trustbuster Thurman Arnold's building industry clean-up campaign moved forward again last month. On the Government mat went the Southwestern Woodwork Assn. of Kansas City, Mo., fourteen leading millwork companies operating in the Association's territory and fifteen company officials. Reason: a Federal

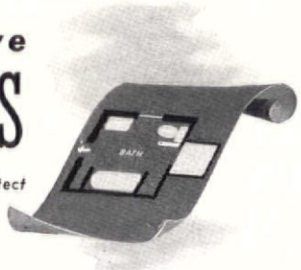
(Continued on page 4)

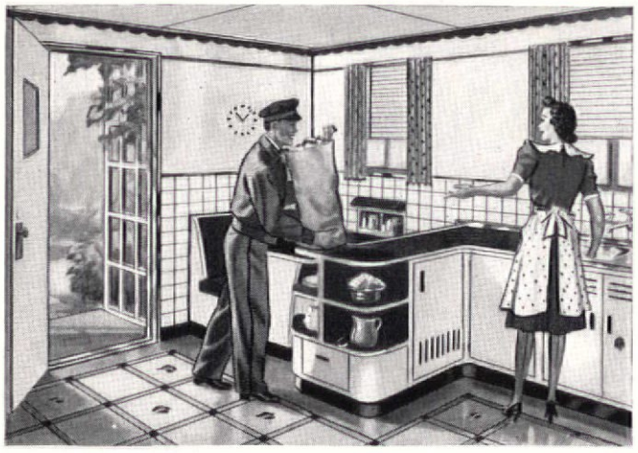


An architect shows how to have

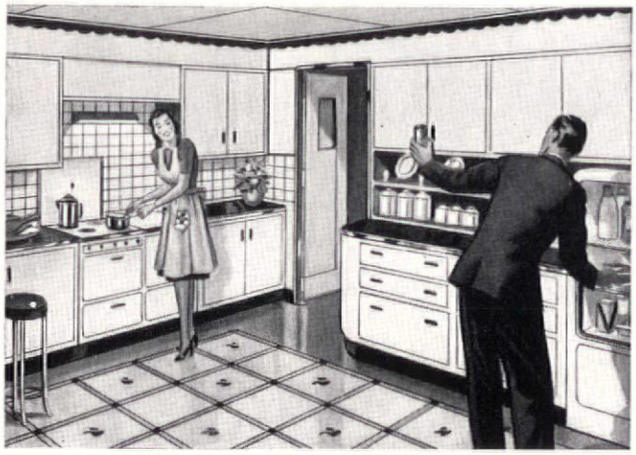
BEAUTIFUL TILE EFFECTS

on a modest budget OTTO TEEGEN, A.I.A., *Architect*

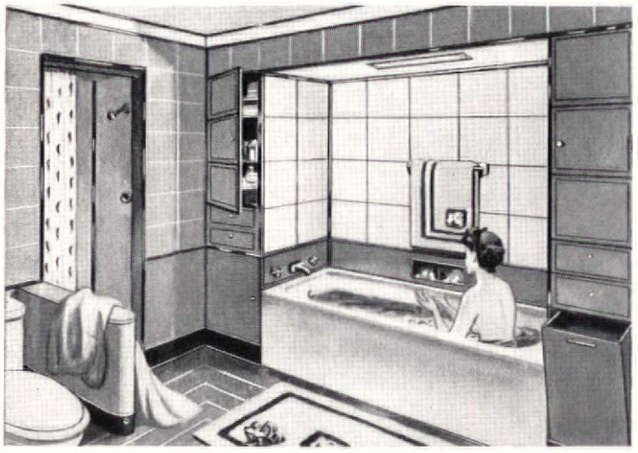




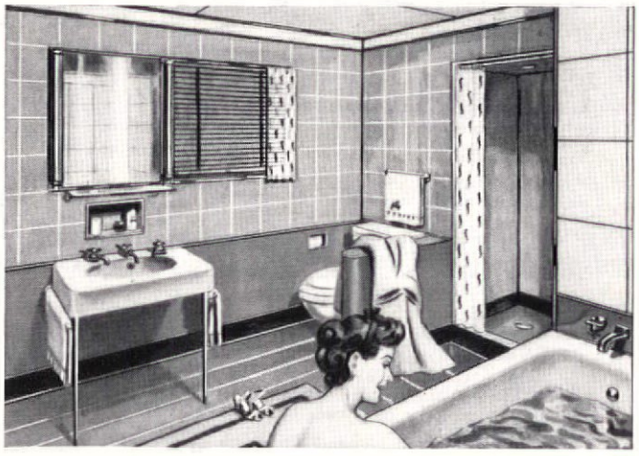
Here's a kitchen designed by Otto Teegen, Director of Architecture of the Beaux Arts Institute, New York. All those luxurious tile effects . . . those smooth, smart upper walls and ceiling . . . that cozy breakfast nook . . . are made possible by two of today's most modern materials—Presdwood Temprtile* and Tempered Presdwood,* the Masonite* wood-fibre hardboards. Counter tops and recessed cabinet base-boards are made of Black Masonite Tempered Presdwood.



Wainscot of Mr. Teegen's Masonite kitchen is Presdwood Temprtile with four-inch squares. The board can be painted or enameled before or after it is applied by nailing or adhesive. Upper walls and built-in cabinets are all Tempered Presdwood, which is especially suited for cabinet doors, because it will not warp, split or crack when properly used. Both boards are economical to apply. They can be cut to fit all sorts of odd-sized areas with ordinary wood-working tools.



And here is Mr. Teegen's bathroom design. Presdwood Temprtile boards with eight and twelve inch squares mark a new note in bathroom wall decoration. Wainscot is Tempered Presdwood, and ceiling is the same material decoratively grooved. Temprtile and Tempered Presdwood are marble-smooth, grainless boards. To redecorate means merely the application of a fresh coat of paint or enamel.



The shower stall is lined with Tempered Presdwood applied with the same metal moldings as those which have been used throughout the room. A recessed shower light above the Tempered Presdwood ceiling shines through frosted glass. Low partition beside the toilet is also made of Tempered Presdwood. Both Presdwood Temprtile and Tempered Presdwood are highly moisture-resistant.

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TEMPRTILE

THE WONDER WOOD OF A THOUSAND USES
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THE ARCHITECTURAL FORUM

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VOLUME 74
Number 4

grand jury returned an indictment charging that the 30 defendants had violated the Sherman Anti-Trust Act by fixing arbitrary and non-competitive prices on stock millwork (windows, sash, doors, trim, etc.) sold by jobbers to retail lumber dealers, builders and contractors in Missouri and nearby States.

Specific charge against the Association was the maintenance of a price list (quoted by jobbers to retailers) by estimating jobbers' costs and profits on each item of millwork and then adding arbitrary markups to these estimates. Claim is that prices actually paid by retailers were determined by applying discounts, fixed by the Association, to the list prices and that the Association policed the agreement among the defendant jobbers and enforced it by threats to boycott any millwork manufacturer who disregarded the fixed prices. The case is still pending.

One month earlier, "Buster" Arnold won a signal victory when the Western Pine Assn., 59 lumber companies and fourteen individual lumbermen entered pleas of nolo contendere to a grand-jury-supported charge of Federal anti-trusters, stepped up and paid a total of $81,500 in fines. Commented Special Assistant to the U. S. Attorney General Tom C. Clark: "The prosecution of this case along with the West Coast Lumbermen's Assn. was instituted by the Government for the reason that a close-knit conspiracy has for many years existed in the lumber industry which has resulted in a curtailment of production and a stabilization of prices. . . . In entering this consent decree, the pine lumber industry of the ten Western States recognizes the merits of the Government's position and agrees to correct all the evils complained of in the indictment." Biggest individual fine, $5,000, was paid by the Association; several of the companies were assessed $1,000 each; all of the individuals, $500 each.

ADJUSTED RENTS CON'T.

Since THE FORUM recently outlined a suggestion for improvement of the public housing program by adjusting subsidized rents to dwellers, not dwellings (ARCH. FORUM, Feb. 1941, p. 140), several experiments in this direction have come to light.

► In Washington, D. C. Director John Ihlder of the Alley Dwelling Authority has announced that a family occupying a USHA project will pay a minimum rent of $11 per month, regardless of the size of its apartment, provided however that the family's income does not exceed $55 per month. A higher incomer will pay proportionately more rent until the economic rent for the occupied apartment is reached. When this point is reached, the family will be ousted, told to seek accommodations in privately financed housing.

► In New York City the local housing authority has decided to guinea-pig the adjusted rent plan in its new $5.6 million East River Houses. The 1,170 dwelling units have been grouped according to their sizes; each group has been assigned three different rentals according to the location and desirability of the units; and family income eligibility limits have then been established for each group. Thus, the three-room apartments will rent for about $19, $24 and $30, depending upon location, to families earning between $849 and $1,499 per year. Indicating that the authority recognizes that a big family may require a big apartment at a low rent is the fact that the least desirable six-and-one-half room units in the East River Houses will rent to families earning less than $1,049 for about $20 per month—almost the same rental as that charged for an apartment half as big.

►In Atlantic City, N. J., Boston, Mass., and Raleigh and Wilmington, N. C., local housing authorities have announced their intentions to establish similar schedules of rents adjusted more to the incomes of tenants than to the size of the apartments they occupy.

Once in operation, the results of these adjusted rent plans will make interesting comparisons with the orthodox policies followed in USHA's 300-odd other projects, may even demand a nation-wide revision of public housing rental procedure.

HOME BUILDERS

Last month the new-born representatives of U. S. house builders (ARCH. FORUM, Mar. 1941, p. 2) began to talk. A loyal subsidiary of the National Assn. of Real Estate Boards, the Home Builders Institute of America announced a significant eight-point program for the general improvement of the industry. Meanwhile, the Home Builders Assn., an insurgent independent group of younger, lower cost, bigger volume builders announced a one-point program toward easier home financing terms.

HBI puts first on its agenda the preparation of model State legislation establishing minimum qualifications for the licensing of speculative builders. The organization hopes that all States will eventually follow the lead of California, Michigan and the District of Columbia which already have builder licensing laws of one form or another to protect the public and discourage shoddy construction and shoestring house building operations.

Other proposed undertakings of HBI as outlined last month by President David D. Bohannon of San Francisco, include: 1) Publication of a confidential tip sheet on material price fluctuations, market trends, pending legislation, etc. which will assist members in the planning of their production. 2) Cooperation with financial institutions toward the fitting of home purchase plans to home buyer needs. 3) Study of mutual or cooperative methods of purchasing materials on a local, perhaps national, scale as an aid to cost reduction. 4) Study of similar methods of buying liability and other types of builder insurance. 5) Conference with city representatives on the improvement of local building codes. 6) Cooperation with private and public housing research organizations. 7) Preparation of a handbook on the merchandising of houses. Good bet is that, since HBI is a NAREB child, this merchandising guide will depict the realtor as the home builder's No. 1 sales tool.

HBA, for the time being at least, has funneled all its energies toward one goal — liberalization of the FHA mortgage insurance program. Specifically, HBA is stumping for enactment of the pending Sacks amendment to the National Housing Act which would authorize FHA to insure 30-year mortgages covering 95 per cent of the valuation of houses and lots valued up to $6,000, thus reducing the necessary cash down payments to only 5 per cent. (Present limitations: 25-year, 90 per cent mortgages with 10 per cent down payments.) Argument advanced by HBA's President Edward A. Kerr of Philadelphia is that FHA's losses on under-$6,000 houses have been negligibly small and that, since mortgage risk depends largely on the borrower's ability to meet monthly payments, the proposed NHAct amendment would not jeopardize this record. Reason: monthly payments on a 30-year 95 per cent loan are only a few dollars higher than under the existing 25-year 90 per cent plan. The $300 difference between the down payments on a $6,000 property would undoubtedly open up the housing market to a vastly greater proportion of the population.

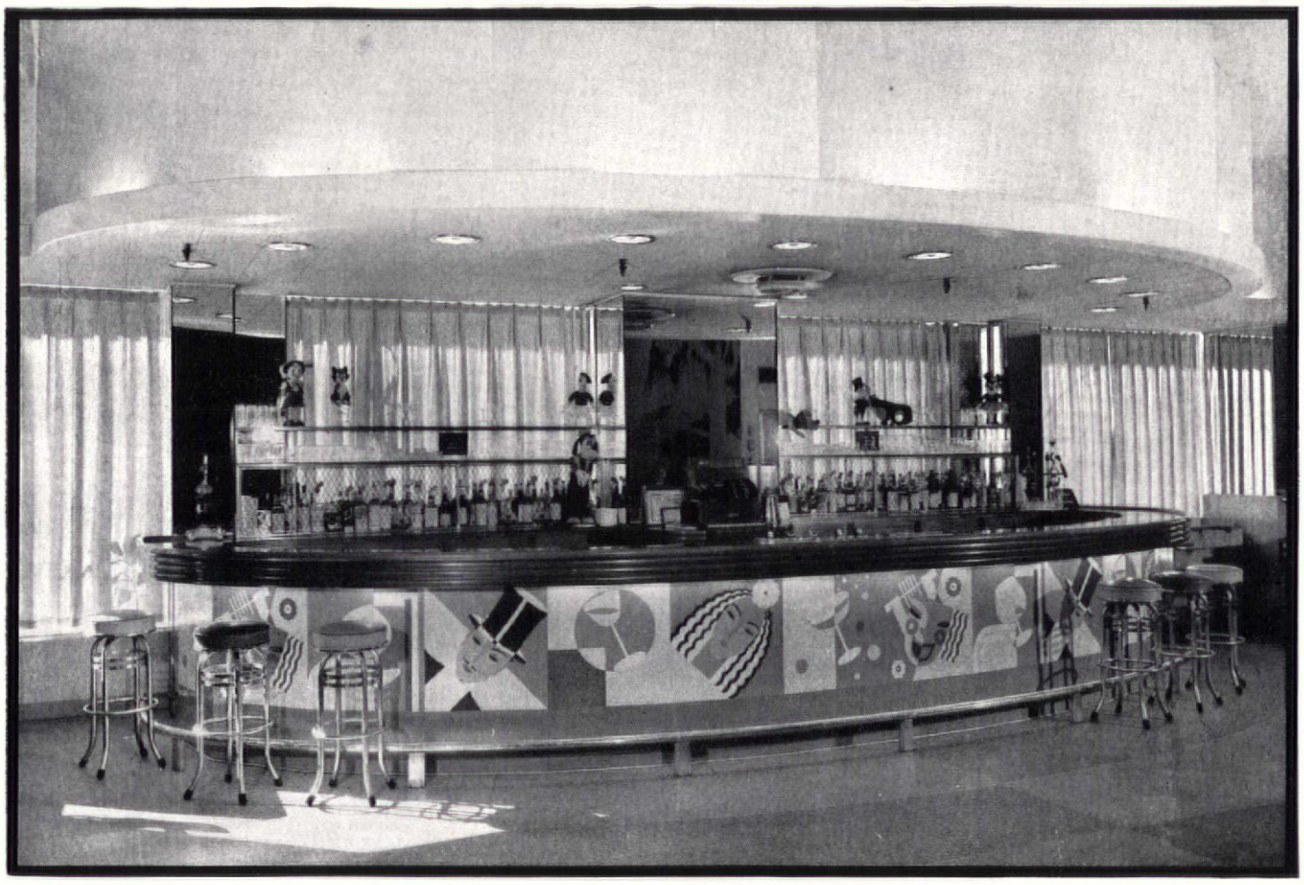
While HBAster Kerr's reasoning holds true for short-term mortgage risks, it is open to question when the entire life of a mortgage is considered. Thus, if a breadwinner buys a house at age 30 (close to the average) he will still be paying for it at the generally-accepted retirement age of 60. Many a sage observer believes that a 25-year mortgage (paid off at age 55 in this near-average case) is too long and that time will prove it to FHA's embarrassment.

SWOPE REPORT

Early last year the biggest local public housing job in the country was given to the former president of the General Electric Co., Gerard Swope. As chairman of

(Continued on page 66)

» Novel, Pictorial Bar Panels with FORMICA INLAYS



PICTORIAL INLAYS in metal or color in bar or back bar panels or in wainscoting make possible the widest range of decoration. They are adaptable to bar, soda fountain, door or bathroom paneling . . . The pictures embedded in the Formica sheet, become an integral part of it, with all the durability and resistance to wear and abuse that other Formica has . . . The inlays may be characteristic of the place, time or purpose for which the panels are used: we have made race horses for Louisville, alligators and palms for Miami, skyscrapers for New York . . . The picture shows bar panels at Lindy's Restaurant 1655 Broadway, New York. Let us send you information and color suggestions.

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Talk about Tiffany. . .

YOUNGSTER: *Say, what can* I *learn from the Tiffany Building?* My *next assignment will probably be a delicatessen.*

OLDSTER: Listen to the infant! What, for instance, do you know about Kentile—asphalt tile—a flooring they used plenty of?

YOUNGSTER: *Gosh,* another *one of those new products! I'll never learn.*

OLDSTER: New? *Jiminy crickets,* old Dave Kennedy started making Kentile 15 years ago! And you ought to see how swell some of those 14 and 15 year old floors still look.

YOUNGSTER: *And I suppose you think* that *stuff will fit into* MY *pre-shrunk budget?*

OLDSTER: You can't buy anything as practical for *less.*

YOUNGSTER: *Well, then you'll razz me for not thinking about the problem of falling grease and fats and . . .*

OLDSTER: I certainly will—if you don't specify *greaseproof* Kentile. Oils and fats just won't stain Greaseproof Kentile.

YOUNGSTER: *But I can't just be* practical. *I'm an ARTIST—I want color, pattern,* beauty!

OLDSTER: If you can't get the right effect with Kentile's 44 colors go back to school. Maybe you should, anyway.

YOUNGSTER: *I'm weakening . . . but . . . but . . . supposing this floor has to go on concrete in direct contact with earth? You know I usually get the basement jobs.*

OLDSTER: Then asphalt tile is the *only* thing you should use. Moisture never harms Kentile.

YOUNGSTER: *Alright . . . alright . . . so now I know about Kentile.*

OLDSTER: Jumping Jehosaphat, you're just *beginning* to learn. But I can't be your tutor forever. *You* learn ALL about that perfect flooring for yourself. Believe me, there's *plenty* to know about Kentile.

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Mail it today. This coupon will bring you, without obligation, *all* the facts about Kentile, its complete range of plain and marbleized colors, the many ways in which it will help you in your work.

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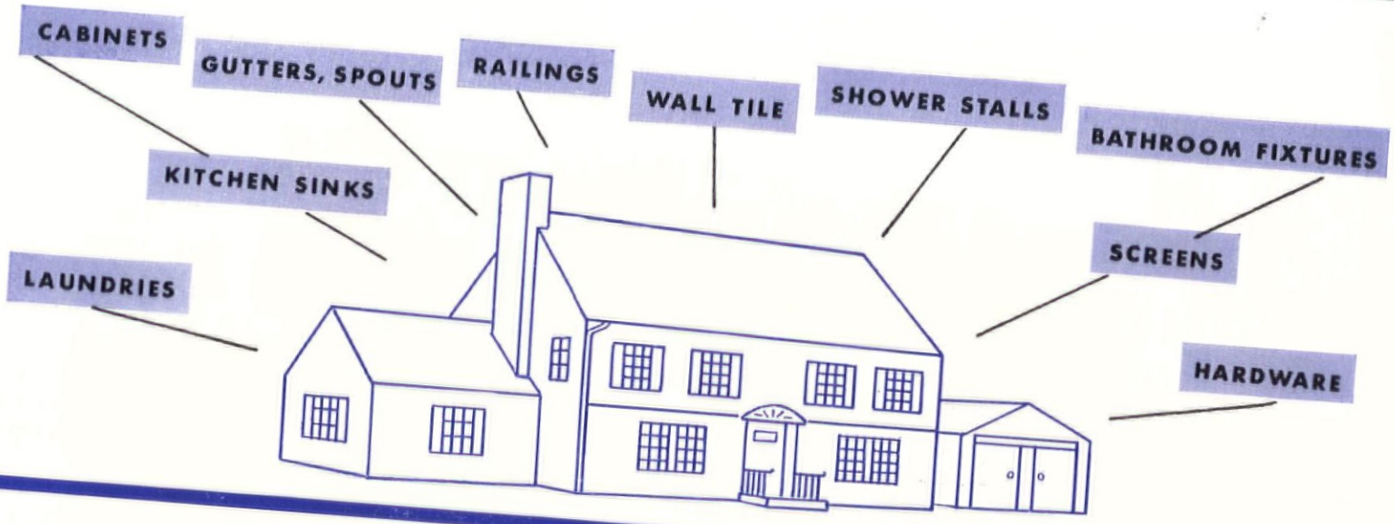

How Stainless Steel serves *in the modern house*

IN private homes where equipment is designed for permanence and beauty, architects, designers, and home owners are specifying stainless steel for an increasing number of exterior and interior applications. Stainless steel will not tarnish or become dull . . . resists scratching and denting . . . is inexpensive, considering its long life. It can be washed as easily as glass. No polishing is necessary to keep it permanently bright.

Although we do not make steel, we have for over 35 years produced "Electromet" ferro-alloys and metals used in making steel. With the knowledge accumulated from this experience, we are in a position to give impartial assistance to architects, designers, and others who work with steel. If you are interested in the manufacture, fabrication, or use of steel of any kind for a specific purpose, consult us without obligation.

ELECTRO METALLURGICAL COMPANY
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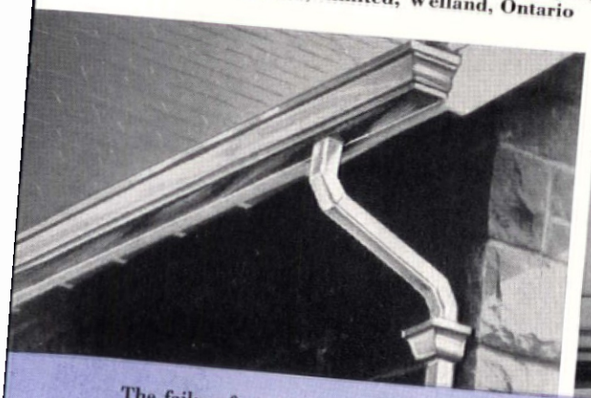
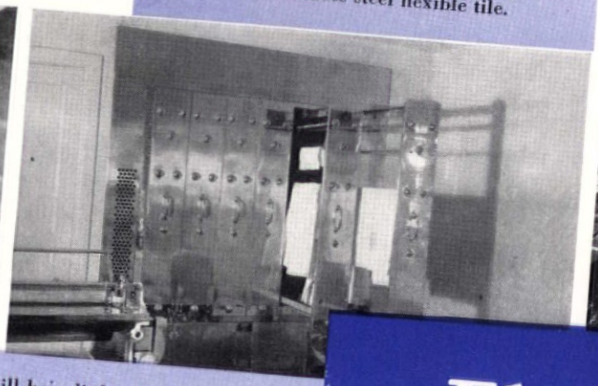
Above: A kitchen equipped with glistening stainless steel work surfaces and trim means less work for the housewife.

Right: The walls of this glistening shower stall will require little maintenance because they are of stainless steel flexible tile.



The failure-free service given by stainless steel gutters and down spouts guards against drainage difficulties.



Rust will have little chance to discolor clothes in this home laundry equipped with stainless steel.

Electromet
Trade Mark
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MAKE THIS TEST — *Prove* BRIXMENT is BEST!

1 Slap a small amount of Brixment mortar, and an equal amount of 50-50 lime and cement mortar, on a brick. Wait a minute, then feel each mortar.

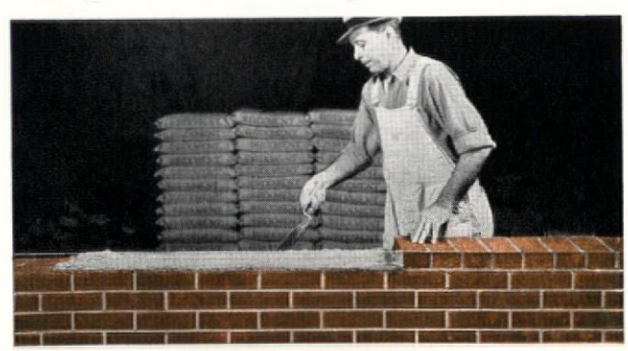
2 Test each mortar. You will find that the Brixment mortar stays plastic *far longer* than the other mortar. This proves *greater water-retaining capacity.*

BRIXMENT *Mortar Has Far Greater Water-Retention!*

WATER-RETAINING CAPACITY is the ability of a mortar to retain its moisture, and hence its plasticity, when spread out on porous brick.

High water-retaining capacity is of *extreme importance* in mortar. If the mortar does not have high water-retaining capacity, it is too quickly sucked dry by the brick; the mortar stiffens too soon, the brick cannot be properly bedded, and a good bond cannot be obtained.

Brixment mortar has extremely high water-retaining capacity. It strongly resists the sucking action of the brick. Brixment mortar therefore stays smooth and plastic when spread out on the wall. *This permits a more thorough bedding of the brick, and a more complete contact between the brick and the mortar.* The result is a better bond, and hence a stronger and more *water-tight wall.*



BRIXMENT

For Mortar and Stucco

Louisville Cement Company, Incorporated, Louisville, Kentucky. Cement Manufacturers for Over a Century.

"When you Men consider Windows, Remember... We WOMEN USE THEM!"

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1—EASY OPENING AND CLOSING! Smoothly . . . easily . . . a Ceco Casement is opened or closed with a mere twist of the wrist. Women want windows that work!

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● You'll spend no more for Ceco Steel Casements! But you'll give home-owners more for their money . . . MORE convenience, MORE comfort and beauty, MORE sunshine and fresh air! Best of all, you will provide windows that even outlast the homes you design or build, with window maintenance costs at an absolute minimum. Ceco Steel Casements are BONDERIZED against rust. Try Ceco Casements on your next few homes!

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FREE!

This attractive "BEAUTIFUL WINDOWS" brochure will help you show your customers the extra value, convenience and beauty of Ceco Casements. Send for your copy today!

Ceco Steel Windows

OTHER CECO PRODUCTS

- MEYER STEELFORMS
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- METAL WEATHERSTRIPS

HEADWAY AND HEADACHES

STATE OF THE PROGRAM

► Defense news of the month for every U. S. industry was the scrawling of the President's signature with a half-dozen souvenir pens on the controversial Lend-Lease Act and his request for $7 billion with which to carry out its objectives. Equal in significance for the building industry with the $250 million of new plant construction needed for this gargantuan aid-to-Britain measure are several other last month developments on the national defense front:

► After justifying its mistakes, the Army asked for and got $339 million to complete its cantonments already under construction, $236 million for additional projects in the current program and $15 million with which to lay plans for another (as yet unauthorized) program of equal size —$1.5 billion (p. 82, col. 2).

► More refreshing news to taxpayers was the announcement at mid-March that Engineer Lockwood Green, Contractor J. A. Jones Construction Co. and 17,000 building laborers had completed $20 million Camp Shelby, Miss., the nation's first finished and largest training center (68,000 men in 13,000 framed tents and 2,000 accessory buildings) in the record time of six months—exactly on the time schedule and about $2 million under the cost schedule.

► Covering the entire Army construction program of 239 projects of all types, last month's official progress statistics were also more cheerful. About 8 per cent of the projects were complete, 10 per cent ahead of schedule, 54 per cent on schedule, 23 per cent behind schedule, 5 per cent not started. Previous report (January 3) grouped the projects thusly, 3, 8, 26, 44 and 19 per cent, respectively.

► Director General William S. Knudsen of the Office of Production Management brought the defense industrial building total up to date (March 1) by announcing that the Government had awarded contracts or issued "letters of intent" covering the construction or expansion of 302 plants involving a cost of $1,574 million. "Certificates of necessity" have been issued for 421 privately financed plants whose cost is close to $393 million, and the British have financed the expansion of 61 U. S. plants to the tune of $171 million. Total: 784 plants at $2,138 million.

► To investigate the Government's contract-letting procedure, Congress authorized an expenditure of $15,000; and to quiet claims of partiality in construction contract letting, the Army strengthened its hold on the "Blossom Committee" by adding to it retired Brig. Gen. George R. Spaulding, an experienced trouble shooter (col. 3).

► Building felt the first formal Government priority ruling when refrigerator producers were told to limit the number of aluminum ice-cube trays in their standard boxes (p. 14, col. 1).

► Defense housing news of the month was the award for the first time of contracts covering prefabricated houses—1,628 units at four different projects (p. 76, col. 2). Meanwhile, Canada set up a Government-owned company with power to order up to $10 million worth of prefabricated houses for crowded military and industrial centers. Some orders may come to U. S. prefabricators.

► Conventionally produced defense housing moved apace with ground breaking ceremonies at fourteen projects, opening ceremonies at four (p. 14, cols. 2 & 3).

► Authorizing 90 per cent FHA-insured loans to private builders of low cost rental-sales housing projects in officially designated defense areas, the Title VI amendment to the National Housing Act sailed through the House without significant change from its original form (ARCH. FORUM, March 1941, p. 172, col. 3), went to the Senate.

► Through the House also went the second Lanham Act, to give the Federal Works Agency another $150 million to spend on housing for the families of enlisted men, civilian employes of the Army and Navy and defense industrial workers.

► Passed by both houses was the $5 million appropriation (reduced from $6.7 million) for the construction of dormitories and the purchase of mobile housing —mostly trailers (ARCH. FORUM, Mar. 1941, p. 50; for presentation of a new mobile house, see p. 20).

► To solve a problem being created by the defense housing program, Congress began consideration of a $150 million Presidential request for increased school, sewer, power, recreation and transportation facilities for defense-boomed communities (p. 12, col. 2).

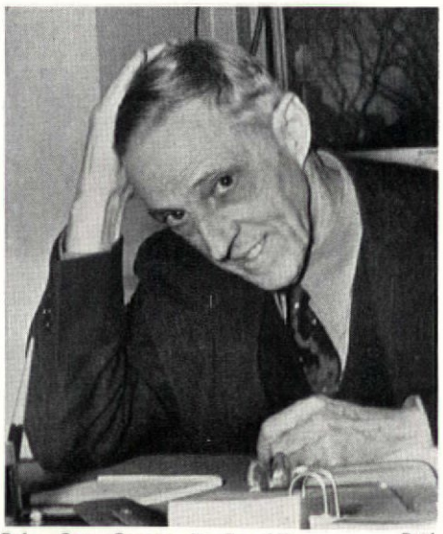
►Smarting under public accusations of shady land purchase deals, the Army reshuffled its real estate department, called in a civilian expert to head it and to try to recoup some of the multi-thousand dollar fees paid to private brokers who assembled the properties.

► Smarting from the lumber price licking it took in its current cantonment construction program, the Army began to prepare for the future by building up a huge reserve lumber stock with the cooperation of private producers (p. 12, col. 3).

TROUBLE SHOOTING

Any construction program approaching $1.4 billion in cost is bound to run into some difficulties. Including the supplemental appropriations obtained last month (p. 82, col 2), the Army's program will cost just that, and it has run into numerous troubles. To shoot some of them, the Army called Lt. Col. Brehon B. Somervell to the post of Chief of Quartermaster Corps' Construction Division (ARCH. FORUM, Jan. 1941, p. 21), subsequently rewarded him by pinning a full colonel's silver eagles on his shoulders. To shoot still other troubles, the Quartermaster Corps last month, at Somervell's behest, called from retirement Brig. Gen. George R. Spaulding to serve on the Construction Advisory Committee.

Known popularly as the "Blossom Committee" (Private Enterpriser Francis Blossom is chairman), this group is the point of contact between the Quartermaster General and job-seeking private contractors. It interviews construction contractors, analyzes their qualifications, makes recommendations concerning their employment. (The committee usually recommends three qualified contractors for each job, from which the Quartermaster Corps selects one or two.) Offering questionable evidence, several Congressmen have accused the Committee of



Brig. Gen. George R. Spaulding *Reni*

Charles E. Steinheimer

WARTIME HOUSING IN CANADA

F. W. NICOLLS, M.R.A.I.C.
Director of Housing
Technical Adviser for Rent Control

Fifteen months ago Canada was a nation at peace. Today, as a nation at war the necessities of wartime economy have forced upon the Dominion the restriction of many of its peacetime activities. One of those policies which has been considerably affected is housing.

For the purpose of convenience we may divide the present housing problem in Canada into two parts: (1) the general housing problem arising out of the lack of adequate residential building during the past decade; and (2) the special housing problem now arising out of the greatly expanded industrial activity and military concentrations in particular localities.

The general shortage of housing accommodation in Canada is the result of very much the same circumstances which have occasioned housing shortages in the United States and other countries. After a comparatively active period of new residential building during the 1920's when the volume of contracts awarded reached $139 million in 1928 and averaged $104 million for the eleven-year period, 1921-1931, this volume dropped rapidly to a low point of $24 million in 1933. Since 1933, while improving economic conditions generally and a number of special encouragements and measures enacted by the Dominion have resulted in a considerable expansion in the volume of home building (contracts awarded in 1939, $67 million), this expansion has not been sufficiently large to reduce the accumulated backlog, or in fact to meet even the normal yearly requirements. With the additional demand by many families previously "doubled-up," but now able to enter the market for separate housing accommodation because of rapidly increased business activity and employment, the percentage of vacancies in most centers has dropped to between 1 per cent and 2 per cent, is, in many communities, below 1 per cent, and in a not inconsiderable number, zero.

BACKGROUND

While the housing measures adopted by the Dominion during the past few years differ in detail from those adopted in the United States they have, in principle, involved the same purposes. Aside from the specific purpose of improving housing conditions, these measures had as their prime objective the provision of employment in the construction industry which was severely depressed and remained amongst the slowest in the recovery movement. With the shift from unemployment to a relative shortage of skilled labor in the building trades occasioned by the extensive construction program for war purposes, a number of adjustments, changes, and terminations in the general housing policy have been found necessary.

Corresponding roughly to Title I of the U. S. National Housing Act, the Home Improvement Loans Guarantee Act, 1937, provided in Canada financial assistance to home owners desiring to improve their residential property or properties. Under this Act the Dominion was authorized to guarantee the chartered banks and certain other approved lending institutions against loss on loans made by them within the meaning of the Act up to a maximum of $50 million. The guarantee to be provided by the Dominion was limited to 15 per cent of the amount of loans made by each, or a total guarantee not exceeding $7 million. As at September 30, 1940, the total amount so advanced by the lending institutions stood at $48 million. On October 23, 1940, the Minister of Finance announced that the amount eligible for guarantee would not be increased, and that only those loans made on or before the 31st of October, 1940 would be considered as coming within the Dominion guarantee. In announcing this decision the official statement notes the aid which was given to employment by the measure, the small amount of loss paid by the Dominion (less than ¼ of 1 per cent of total loans to September 30, 1940) with over 62 per cent of the total volume of loans already repaid. The statement also re-confirms the general policy of the Government to restrict, where possible, its obligations and commitments to those services and programs essential to the War effort.

The Dominion Housing Act, 1935, and more recently Part I of the National Housing Act, 1938, were designed to make available in Canada home financing facilities loosely comparable with those available in the United States under the Insured Mortgage System. Part II of the National Housing Act also provided for loans to assist local housing authorities including limited dividend corporations to finance low rental units for lease to families of low income at less than economic rentals. Part III, which has no counterpart in the United States legislation, provided for the encouragement of low cost home building through the payment by the Dominion of a substantial portion of the municipal taxes on the new house for a period of three years. While under the original terms of Part III these tax payment provisions were made to apply to certain classes of houses commenced on or before December 31, 1940, they were restricted in December, 1939, as a measure to conserve resources, to apply only where construction was commenced on or before May 30, 1940. Similarly, when the authority to make project loans under Part II lapsed in March, 1940, this authority was not extended.

Aside from the Home Improvement Plan, however, the basis of most of the Dominion's Housing program has been Part I

of the National Housing Act. In contrast to the American legislation the Dominion's National Housing Act provides only for loans to finance new houses and the funds advanced to borrowers are provided in part (25 per cent) by the Government. The changes to this Part announced in December, 1939, involved primarily loans to finance higher cost dwellings and apartment and duplex houses. Under these restrictions loans were limited to a maximum of $4,000 and were limited also to the financing of single family houses. Up to October 31, 1940, the gross amount of loans approved under this Part was $64 million and the number of new dwelling units provided was 18,900. Despite the restrictions applicable to the 1940 period approvals in the first ten months have aggregated $15,800,000 against $17,400,000 in the same period in 1939. In comparing these figures with operations in the United States it must be remembered that the population of the Dominion is only about one-eleventh of that in the United States.

HOUSE TYPES

The illustrations show plans and photographs of three typical houses built in Canada since the outbreak of the War. These houses are now being built at a cost of $2,500 to $3,750 complete, including the lot.

The brick house (**1**) was designed for use on a narrow lot (minimum frontage 30 ft.), is 20 ft. 6 in. wide by 39 ft. deep, and contains minimum housing accommodation suitable for the average working man. The construction is in accordance with the standard practice. Basement walls are 10 in. solid concrete, exterior walls are 9 in. brick, interior finish is plaster on insulated plaster base. Hardwood floors, pine and fir trim, complete plumbing, including hot water piping in copper, built-in bath and electric domestic hot water heater. Heating system is hot air, and roofing is asphalt shingles. The cost of this house, exclusive of lot, located in the suburbs of Toronto was $3,200 or approximately 21 cents per cu. ft.

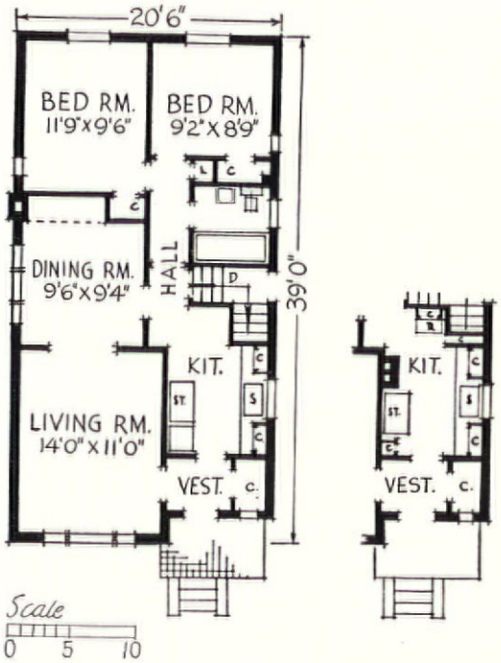
The frame house (**2**) is a design which is very popular, a number of dwellings of this plan having been built across the Dominion. This house is 24 x 24 ft. and may be located on a lot with a minimum width of 33 ft. The particular house illustrated was constructed of 2 x 4 in. stud walls with exterior covering of masonite backed with tentest with battens covering the joints. Exterior finished in paint, interior finish fiberboard and masonite. Floors are of masonite and heating system is hot water. Except as noted, the general specifications of this house are similar to those for the brick house illustrated in figure 1. The cost of the particular house illustrated, exclusive of lot, was $2,800 or approximately 22 cents per cu. ft.

The stuccoed house (**3**) illustrates what we call our minimum house plan. This plan is similar to that of the frame house except that the ground floor only is complete. It is typical of many which have been built in Canada at a cost of $2,500, including the lot. In this particular case, the lot cost was $150 and the house, including fixtures, etc., also legal and financing charges, was $2,350. The owner financed this house with a $250 equity and will retire the $2,250 National Housing Act mortgage over 20 years with a monthly payment of $14.71 which includes interest and principal. The construction of the house is in accordance with the standard practice. Basement walls are 10 in. solid concrete, exterior walls are 9 in. brick, interior finish is plaster on insulated plaster base. The attic is unfinished, but may be finished by the owner at a later date, as desired. Heating is by hot air.

DEFENSE PROBLEMS

As a whole there has, to date, been no radical increase in building costs. Except in some particular communities where labor cost may have risen as much as 10 per cent or 12 per cent

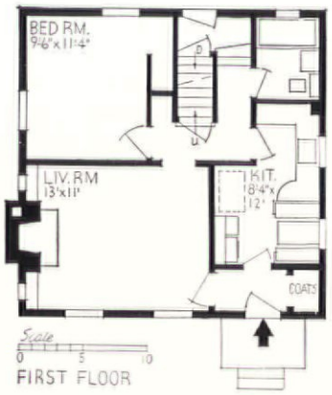
1.



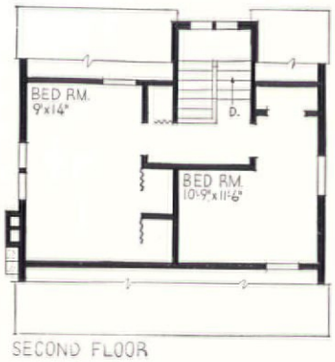
building labor rates have remained fairly steady. The latest index figure available with regard to material prices shows an increase of approximately 8.4 per cent in September, 1940, as compared with August, 1939, the month immediately preceding the outbreak of the War. Based on the 1926 price equalling 100 the index for each of these months was 97.9 in September, 1940 and 90.2 in August, 1939.

The second housing problem which we in Canada are now having to face is the provision of additional housing accommodation in the special war areas. This problem is, essentially, the same as that which the United States is now facing in connection with its national defense program. In making any comparison with the United States activities here again allowance must be made for the difference in population of the two countries. Up to October 31, commitments for construction projects in connection with the Royal Canadian Air Force, Air Training Scheme and the Army totalled $62 million. Naturally, these projects in most instances occasion an influx of population into the localities in which they are located. Added to this

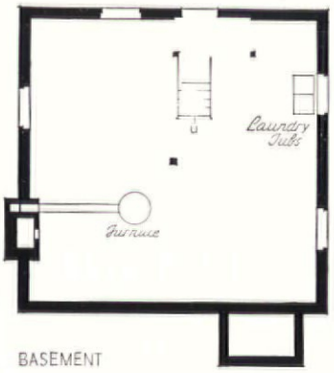
2.



FIRST FLOOR



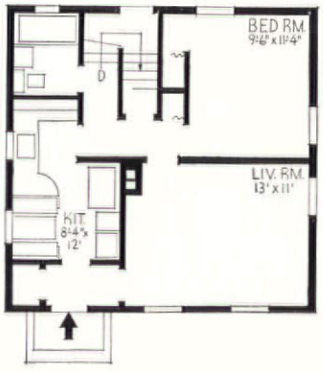
SECOND FLOOR

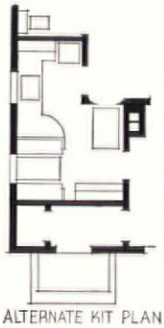


BASEMENT

KITCHEN

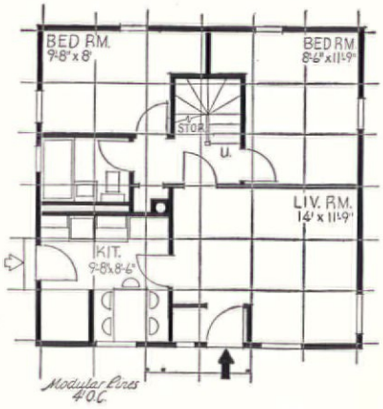
3.





ALTERNATE KIT PLAN

WARTIME CANADIAN HOUSES. 1. Narrow lot type built in Toronto for **$3,200** exclusive of lot. **2.** Square, frame house with one bedroom and bath on first floor, two additional bedrooms upstairs; at **$2,800** plus land, a mark for U. S. builders to shoot at. **3.** Same arrangement in stuccoed brick but with fireplace omitted and upstairs rooms to be finished later by owner; this type is often sold with land for less than **$2,500.** **4.** Plan for factory-fabricated unit which may be built and rented by the government, designed for high salvage value at the end of the emergency.



4.

are commitments by the British and Canadian Governments for factories and plant extensions to the value of some $250 million. While no accurate estimate of the eventual annual output of these plants is yet available, estimates range from $800 million to over $1 billion. These new plants and extensions are, of course, direct Government commitments, and to the increase in labor required in connection with this production, we must add the additional labor demand in many of these communities of private industry now employed at full production on war contracts. Considering that the total value of goods manufactured in Canada during the past few years has ranged between $3 billion and $4 billion the magnitude of this undertaking and the shifts in population which it is likely to entail will be apparent.

Since no announcement has yet been made by the Government itself it is impossible to state specifically what program may be undertaken by the Dominion in these special areas. One aspect of the problem now under study is the possibility of utilizing prefabricated houses in those centers likely to be heavily depopulated at the end of the War. Plan (**4.**) on the preceding page is being developed on the 4 in. modular basis, all exterior walls to be built of 4 x 8 ft. panels, erected on 8 x 12 ft. floor panels. The entire structure would be so constructed that it might be dismantled and the separate units utilized in the construction of different designs if necessary in other localities. Other considerations being taken into account are probable types of labor to be housed (married or single), possibility of utilizing existing accommodation, where available, in surrounding areas (coupled with transportation), and the whole question of rental policy and amortization policy which should be followed.

RENT RESTRICTION

The first positive Government control of housing in Canada was brought into effect with the introduction of rent control. Early in the War it became apparent that if prices were to be controlled and inflation avoided some type of Board with authority over prices would be required. To assume this function the War-time Prices and Trade Board was set up with the duty of safeguarding against the undue enhancement in prices of the necessities of life, as fuel, food and clothing. In September, 1940, owing to the serious shortage of housing in Canada, coupled with the requirements of our War program, control of rentals was also vested in this Board.

The first step to be taken by the Board in respect to housing was to peg rentals in a number of communities where the shortage of accommodation was most acute. By this order rentals were fixed at those in effect on January 2, 1940. In addition to the pegging of rentals in particular communities the Board also assumed authority over all rentals in any community under its general powers to investigate prices, to prevent and to proceed against profiteering.

Housing accommodation to which rent control is applicable is defined to include practically all types of dwelling units, including any furnished or unfurnished house, apartment, flat, room, or dwelling, together with any of the services normally supplied by the landlord. "Landlord" includes any person who lets, or sublets, housing accommodation. "Lease" is interpreted as any enforceable contract for the letting of housing accommodation whether the contract is made orally, in writing or by deed; and "rent" as any payment or consideration for the use of housing accommodation.

The maximum rental at which housing accommodation may be rented or offered for rent in any of the areas where rents are pegged is provided as follows; (1) If there was a lease in effect on January 2, 1940, the rental to be charged is not to exceed that in effect on that date; (2) If there was no lease in effect on January 2, 1940, the rental to be charged is taken as that in effect under the last lease in 1939; and (3) For any other housing accommodation the rental is not to exceed a reasonable and just return on the value of the property. In the case of dispute in this last instance the Rentals Administrator "on his own motion" or on application by either landlord or tenants, may determine the maximum rentals.

Extensive powers are granted to the Rentals Administrator to vary the maximum rentals as determined by the lease in effect January 2, 1940, or in 1939, under special circumstances. As a general rule, "special circumstances" is interpreted to include increased cost of heating apartments, extensive alterations or improvements to the property or an increase in municipal taxation, but improvements and repairs made in the ordinary course of maintenance of the property are not considered justification for an increase. Either landlord or tenant is empowered to make application on prescribed forms for a determination of the proper rental or the Rentals Administrator, "on his own motion" may determine the proper rentals. As a necessary complement to the pegging of rentals, no notice to vacate may be given to a tenant for refusal to pay a rental in excess of the maximum fixed by the Order or determined by the Rentals Administrator. In case of dispute as to the maximum rental applicable, and provided that the tenant makes application to the Rentals Administrator within five days from the receipt of such notice, no notice to vacate may be enforced pending the determination of the proper rental. As a further complement to the enforcement of the Board's Order any rental paid for the use of housing accommodation in excess of that fixed by the Order or determined by the Administrator is made recoverable by the tenant in an action for debt in a court of competent jurisdiction.

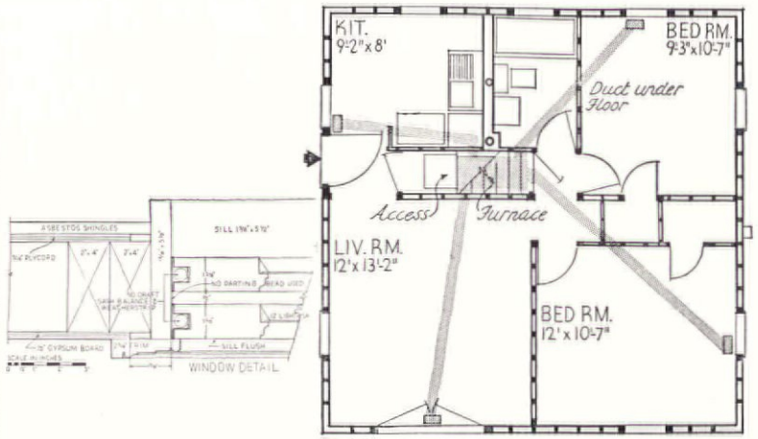
Leases in so far as necessary to give effect to the provisions of this Order are deemed to have been amended.

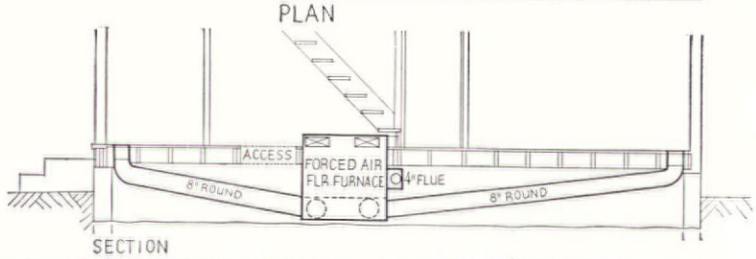
Under the most recent regulations local Boards to deal with applications from landlords and tenants have been set up. All findings of these local boards are subject to approval by the Rentals Administrator and then become final.

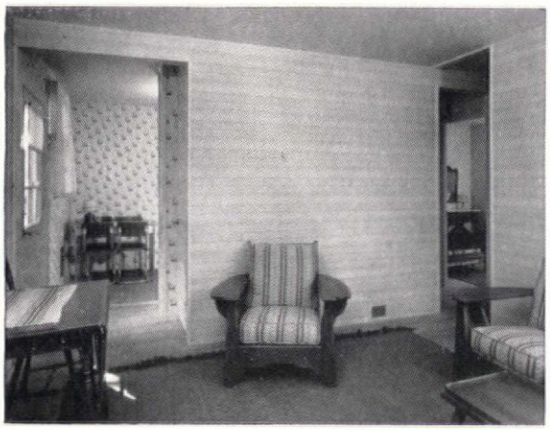
For the purposes of administration therefore we may consider all areas in the Dominion as falling into one of two zones. The first zone includes those municipalities and areas where rentals are pegged by Board Order. This zone is, of course, not fixed, but may be altered or increased in scope by additional Board Orders. The only manner in which rentals may be increased in this area is through approval by the Administrator to such an increase, based on application by the landlord who is required to submit such complete information, as required. The second zone includes the balance of the Dominion where rentals are not pegged. In this zone any tenant has the right to protest against an increase or proposed increase in rent, and upon investigation the Board may require the landlord to accept the rent in effect prior to the proposed increase, may allow the increase, or part of it.

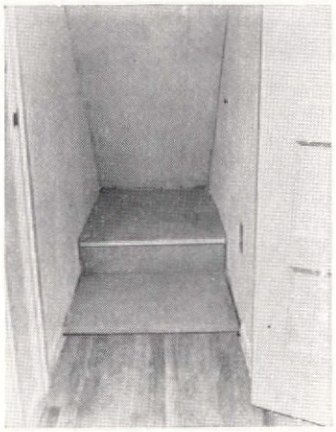
Under this system of protests the first question which had to be settled was the criterion to be adopted in deciding upon allowance, partial allowance, or disallowance of proposed increases. The criterion adopted was a reasonable return on the present value of the landlord's investment. While a comparative basis might in some respects be considered more equitable it must be remembered that the prime function of the Wartime Prices and Trades Board is the prevention of profiteering. Also particular attention is given to all data submitted with landlords' protests in relation to past operations to assure that unwarranted valuations are not made the basis for elevating poor or unwise investments into profitable investments with the assistance of awards under the Rental Control legislation.

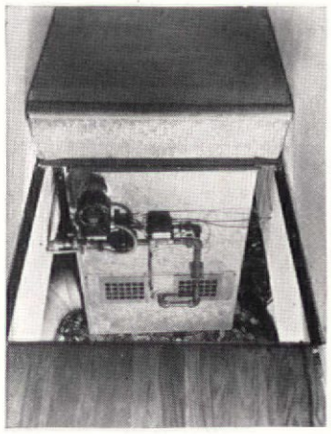
Ankers Photos











Clean design of the Daniels' standardized houses is complemented by the site's rolling, wooded character, its staggered building lines and the interesting solution to the platting problem offered by its triangular shape. Also shown to the left is the horizontal construction of exterior walls. Behind the living room wall (left, above) is the closet-staircase beneath which is located the new type of central heating plant—note the heat outlet grille in the baseboard. Inside the closet (right, above) is seen the small plenum chamber and, when the access floor panel is removed, the compact heating unit. Furnace is thermostatically controlled.

Construction economies were achieved through the careful detailing (at three inch scale) of many elements of the house, thus minimizing cutting (labor) and waste (materials). Example: in two hours' time per house, four carpenters assembled the complete frames for all four walls (horizontally on the floor), sheathed them and raised them into place. Other principal time and money savers: the flue comprised of long lengths of insulating material, the simplified window units designed by and assembled especially for the Daniels (see detail drawing, above) and the practice of laying the floors and applying the interior finish prior to the erection of partitions.

In an effort to develop the construction procedure as closely as possible to the pattern of a fixed assembly line, the workmen were taught to perform the two operations

(Continued on page 44)

COST BREAKDOWN

Preparing site	$ 24
Masonry (concrete & cinder block)	76
Steel (includ. flue stirrup)	16
Lumber (plywood, gypsum, shingles)	512
Millwork	90
Carpentry (includ. roofing & metal)	300
Plumbing	367
Heating (unit, flue, sheet metal)	170
Wiring	46
Hardware	64
Preparing walls & papering	80
Painting	67
Common labor	75
Landscaping	50
General administrative expenses	80
Insurance	36
Profit (less $50 loss on lot)	250
Financing & selling expenses	237
Lot (FHA allowance $400)	450
TOTAL	**$2,990**

CONSTRUCTION OUTLINE

FOUNDATION: Cinder block piers; Johns-Manville Co.'s Asbestosboard skirting used in full 4 ft. widths and backed with Celotex Corp.'s Vaporseal sheathing.
STRUCTURE: Exterior walls—asbestos shingles, Bird & Son; 30 lb. felt; Plyscord sheathing, U. S. Plywood Co.; pine studding; inside—Gold Bond gypsum board, National Gypsum Co., backed with aluminum foil, edges recessed and finished by Perfatape method. Floor construction—Plyscord subfloor; 30 lb. slaters felt; white oak finish.
ROOF: Covered with Celotex asphalt shingles, Celotex Corp.
CHIMNEY: Transite—Johns-Manville Co.
INSULATION: Outside walls—aluminum foil. Foundation walls—see above. Attic floor—Kimsul, Kimberly-Clark Corp. Weatherstripping—Master Metal Strip Service Co.
FLOOR COVERINGS: Main rooms—oak. Bathrooms—Chromalin, Bird & Sons.
WALL COVERINGS: Main rooms—wallpaper, Union Wall Paper Co. Kitchen and baths—Wall-Tex, Capital Wall Paper Co.
HARDWARE: By National Hardware Co.
KITCHEN EQUIPMENT: Range—The Majestic Co. Sink—American Radiator-Standard Sanitary Corp.
BATHROOM EQUIPMENT: All fixtures by American Radiator-Standard Sanitary Corp. Cabinets—The F. H. Lawson Co.
HEATING: Gas fired warm air system; Bryant fan floor furnace, Bryant Heater Co.

FORUM BUILDING COST INDEX spotlights upswing in 49 of 81 cities.

As shown in the tabulation below home building costs, expressed in per cent of the 1936 national average, are currently working upward in 49 of the 81 reporting cities, are higher than a year ago in 47 cities. Biggest recent cost jumps have taken place in Camden, N. J., Birmingham, Ala., and Portland, Ore.; biggest drops in Salisbury, N. C., Wheeling, W. Va., and Houston, Tex.

Reduced to one composite figure, the national index for September stood at 107.0 per cent of the 1936 average, as compared with 106.2 per cent for August and 105.7 per cent for September 1939. The rising cost of materials is largely responsible for the general cost advance. The cost of building labor has remained comparatively constant during the past two years.

STATE	CITY	LATEST REPORT	PRECEDING REPORT	YEAR AGO
ALA.[1]	Birmingham	96.4	91.7	93.1
ARIZ.[2]	Phoenix	112.1	112.1	110.8
ARK.[2]	Little Rock	92.9	93.4	94.4
CALIF.[2]	Los Angeles	95.0	94.9	94.6
	San Diego	96.2	96.0	101.3
	San Francisco	113.0	113.7	114.1
COLO.[1]	Denver	110.8	110.1	113.4
CONN.[1]	Hartford	106.3	108.9	105.5
	New Haven	106.1	106.1	102.5
DEL.[2]	Wilmington	94.3	94.6	97.9
D. C.[1]	Washington	106.5	103.7	103.7
FLA.[1]	Tampa	103.3	102.5	100.8
	West Palm Beach	111.3	109.4	103.1
GA.[1]	Atlanta	88.2	88.1	88.6
IDAHO[3]	Boise	116.3	113.3	111.4
ILL.[1]	Chicago	123.7	122.4	122.3
	Peoria	128.5	128.0	120.0
	Springfield	129.6	129.2	122.5
IND.[3]	Evansville	114.2	110.5	110.2
	Indianapolis	100.4	99.3	103.5
	South Bend	109.9	106.7	105.7
IOWA[3]	Des Moines	115.7	114.8	113.9
KAN.[1]	Wichita	....	105.5	108.5
KY.[2]	Lexington	100.8	103.3	100.4
	Louisville	98.0	98.5	94.5
LA.[2]	New Orleans	103.1	104.2	102.0
ME.[1]	Portland	95.4	95.0	94.9
MD.[1]	Baltimore	88.8	85.0	85.1
	Cumberland	....	....	99.0
MASS.[1]	Boston	117.3	117.2	114.5
	Worcester	....	....	102.6
MICH.[3]	Detroit	108.7	105.6	107.3
	Grand Rapids	106.4	102.3	102.5
MINN.[3]	Duluth	111.3	111.4	109.2
	St. Paul	117.6	117.2	118.4
MISS.[2]	Jackson	110.0	110.0	106.5
MO.[3]	Kansas City	104.8	106.3	107.7
	St. Louis	108.6	107.9	109.4
MONT.[3]	Great Falls	124.5	124.5	124.5
NEB.[1]	Omaha	106.9	110.7	107.4
NEV.[2]	Reno	122.5	122.5	118.8
N. H.[1]	Manchester	98.0	97.4	96.4
N. J.[3]	Atlantic City	111.6	108.2	113.4
	Camden	113.1	107.7	105.4
	Newark	103.6	103.3	102.2
N. M.[2]	Albuquerque	....	112.3	115.7
N. Y.[3]	Albany	102.3	101.8	101.3
	Buffalo	103.8	103.3	106.9
	Utica	114.1	113.1	105.6
	White Plains	101.2	98.2	100.1
N. C.[1]	Asheville	89.3	90.0	87.8
	Raleigh	93.9	90.5	87.7
	Salisbury	82.8	88.5	84.0
N. D.[3]	Fargo	104.8	104.0	105.8
OHIO[2]	Cincinnati	100.6	99.5	103.8
	Cleveland	124.5	121.0	117.3
	Columbus	104.0	104.8	101.6
OKLA.[1]	Oklahoma City	110.2	110.6	106.5
ORE.[3]	Portland	102.2	97.5	95.5
PENNA.[2]	Harrisburg	106.9	105.5	103.5
	Philadelphia	105.1	102.6	99.1
	Pittsburgh	111.3	110.9	116.4
R. I.[1]	Providence	110.7	109.6	107.5
S. C.[1]	Columbia	84.6	84.2	85.3
S. D.[3]	Sioux Falls	111.9	111.4	109.4
TENN.[2]	Memphis	96.7	97.5	95.2
	Nashville	88.3	89.4	89.6
TEXAS[2]	Dallas	97.9	97.8	98.2
	Houston	102.7	106.7	106.3
	San Antonio	99.0	99.4	106.1
UTAH[3]	Salt Lake City	110.0	108.6	108.4
VT.[1]	Rutland	98.1	96.3	96.8
VA.[1]	Richmond	89.5	87.1	90.1
	Roanoke	....	94.1	93.2
WASH.[3]	Seattle	116.7	114.6	114.1
	Spokane	....	114.1	113.6
W. VA.[2]	Charleston	105.0	105.8	105.1
	Wheeling	109.7	114.7	114.1
WIS.[1]	Milwaukee	113.2	109.8	107.4
	Oshkosh	105.7	105.4	106.7
WYO.[3]	Casper	108.9	108.9	119.2

FOOTNOTES.

1 Latest report—September; preceding report—June; year ago—September 1939.

2 Latest report—August; preceding report—May; year ago—August 1939.

3 Latest report—October; preceding report—July; year ago—October 1939.

Based on Federal Home Loan Bank Board statistics covering the cost of building the same typical house in each city. This typical or standard house has six rooms, a total volume of 24,000 cu. ft. On the first floor are living and dining rooms, kitchen and lavatory; on the second floor, three bedrooms and bath. Exterior finish is wide-board siding with brick and stucco as features of design. Included in the cost of the standard house are all fundamental structural elements, an attached one-car garage, unfinished cellar and attic, fireplace, insulation, and all essential plumbing, heating and wiring. Only cost variables are materials and labor; compensation insurance, overhead and profit are included as constants. Excluded from the cost of the standard house are all items of finish and equipment such as wallpaper, lighting fixtures, refrigerator, window shades, etc. Costs do not include land, landscaping, walks and driveways, architect's fee, building permit, financing charges, etc. For a more detailed explanation, see ARCH. FORUM, Dec. 1939, p. 474.

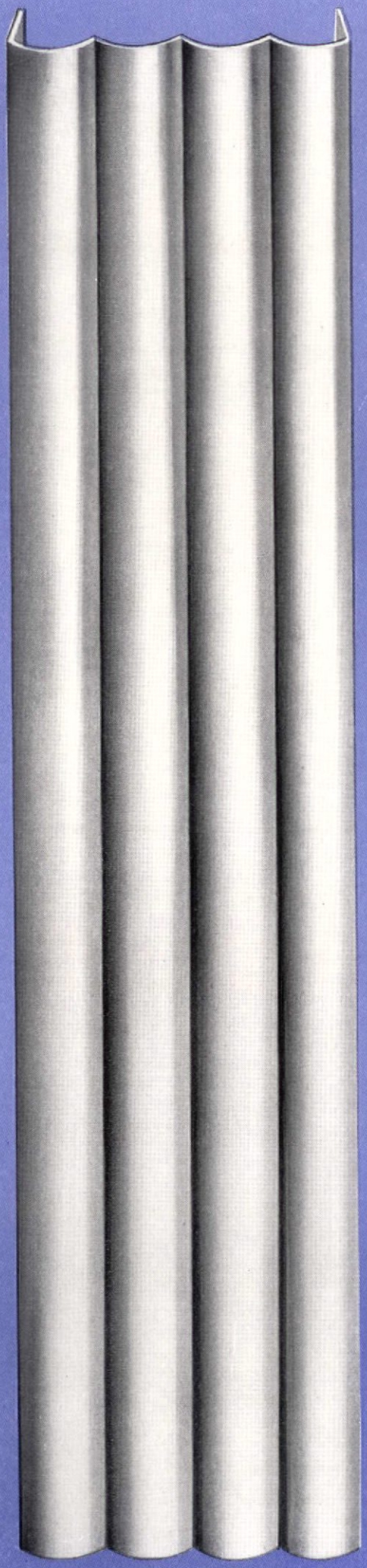
PURPOSE OF INDEX

1. To show the trend of residential building costs in each city by comparison of the first figure for that city (the "latest report") with the figures for the preceding month and the corresponding month of the preceding year.

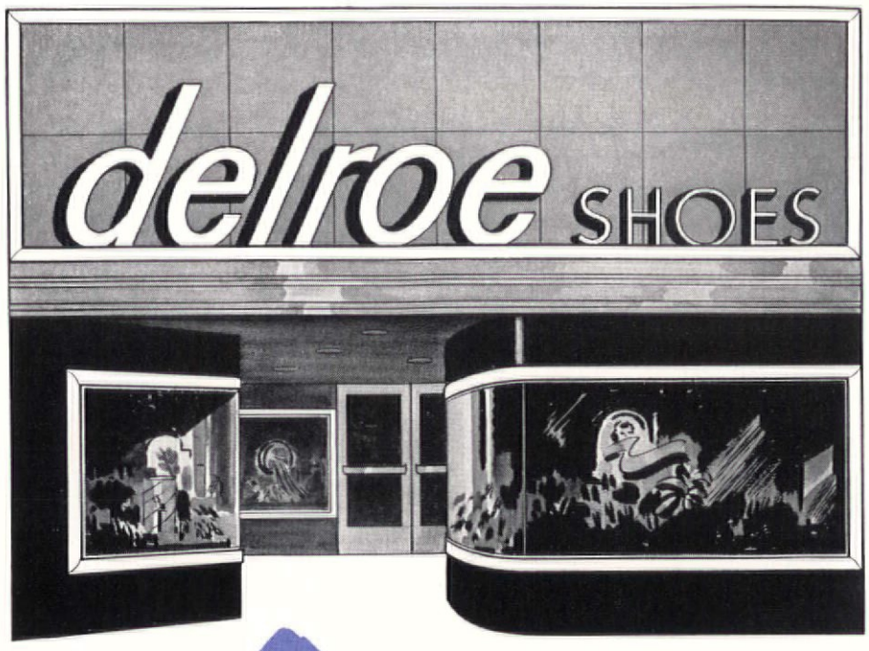
2. To emphasize variations between cities in the cost of building the same house. Since all figures are percentages of the 1936 national average, they are directly comparable and indicate intercity cost differentials.

3. To provide a ready means of roughly estimating the cost of building a house in one city when the cost of building it in another is known. Thus, to estimate the cost in City B of a house built in City A for $5,000, multiply the "latest report" for City B (90.0) by the known cost of the house in City A. The result is 450,000. Then, divide 450,000 by the "latest report" for City A (110.0). The resultant $4,090 is the approximate cost of the house in City B.

Use of the index for this purpose is limited by the definition of the standard house upon which it is based (see left). The index applies to medium-to-small houses, not to large ones replete with expensive equipment. Neither does it apply to costs which include land; usually the value of a lot runs about 15 per cent of the value of the house and lot.



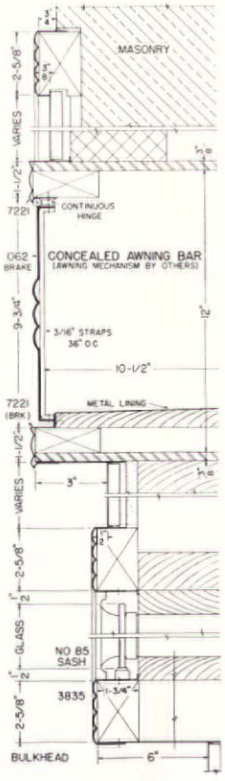
No. 3835



ANOTHER IDEA INSPIRED BY A Kawneer STOCK MOULDING!

JUST ONE INTERESTING SHAPE, like Kawneer Moulding No. 3835, illustrated at the left, can often go a long way toward solving the design problem of a store front!

This moulding has been used, in the shoe store shown above, as the principal feature of the front—to supply the life and lustre that only Kawneer metal can give. Details show how Moulding 3835 has been combined with new No. 85 Rolled Sash and other standard Kawneer Rolled Construction in the complete front.



DELIVERIES ASSURED

Fortunately for the store front industry, Kawneer is in a position to supply your requirements in this important store front year, with Kawneer Rolled Store Front Construction, including the famous fully resilient rolled sash which assures maximum protection for show window glass.

FREE ILLUSTRATED MAGAZINE

The Kawneer Front is published for architects and builders interested in store front work. It includes pictures of new store fronts and data on new Kawneer products. Write today if you are not on our list. THE KAWNEER COMPANY, NILES, MICHIGAN.

IT'S EASY TO DESIGN AND INSTALL STRIKING

Kawneer

STORE FRONTS

poor judgment and partiality, have pointed disdainfully at the engineering contract awarded to Chairman Blossom's New York company, Sanderson & Porter, for part of an $11 million shell loading plant. Result: The Senate last month unanimously authorized a seven-man committee to spend $15,000 investigating the defense program in general and letting of contracts in particular.

Being a straight-forward, hard worker with a trouble-shooting reputation, Gen. Spaulding was added to the committee to calm the teapot tempest and to increase the Army's control over this important advisory body. A 64-year-old graduate of West Point, Spaulding well conceals his age with a trim figure and an informality (see cut p. 10). Behind him are many and varied Army Engineers Corp. experiences. When the U. S. declared war in 1917 Spaulding—then a major—was in charge of the Louisville Engineer District and had the rare experience of being made (temporarily for the duration of hostilities) a lieutenant colonel and then a full colonel all in one day. In France he earned the Distinguished Service Medal for having "served with marked distinction as commanding officer of the 305th Engineers, 80th Division, as Division Engineer of the 80th Division, as Chief Engineer of the 5th Army Corps and as Chief Engineer of the 1st and 3rd Armies. At all times he exhibited professional attainments of the highest order in handling the difficult problems with which he was confronted." Among his biggest peace-time jobs was the direction of public construction along the Ohio River.

Ordained originally as a quintet, the Construction Advisory Committee was further filled out last month by the appointment of a private engineer, Alonzo J. Hammond of Chicago, one-time president of the American Society of Civil Engineers. Thus, today it is comprised of three private enterprisers (Blossom, Hammond, and F. J. C. Dresser) and two Army men (Spaulding and Maj. F. S. Harvey). But, rumor is that Somervell is not yet satisfied with its composition, that some changes will soon be made.

DEFENSE UTILITIES

Since military and naval strategy has called for the construction of many defense projects in small and isolated communities, growing pains rank as the municipal ailment of the day. To help remedy the epidemic, President Roosevelt has asked Congress to appropriate $150 million for the extension of over-taxed community facilities—schools, recreation centers, water supply and sewage systems, power services, streets and transportation lines.

As introduced in Congress, the bill authorizes that action be taken by whatever Federal agency the President may designate and permits a wide range of financing plans varying from 100 per cent loans to 100 per cent grants. The latter proviso would allow the Government to foot the entire cost of public utilities built for a purely temporary defense need. In other cases, where the facilities will serve a more permanent market, local funds from resident taxpayers will shoulder part of the burden as in past PWA programs. Chances are that many of the school and recreation buildings will be of temporary, lightweight, frame construction which will be knocked down with the passing of the national emergency.

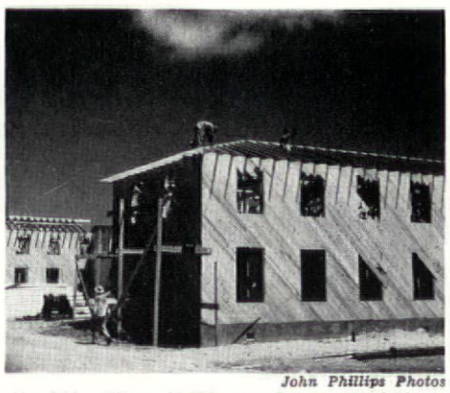
During the House of Representatives hearings on the defense public utility bill, officials of the Federal Security Agency, under whose wing is the Office of Education, made it amply clear that the defense program called for at least $150 million of emergency school construction alone. On the other hand, municipal spokesmen argued that more than the full amount of the sought-for appropriation could wisely be spent on pipe lines, wires, roads, etc. Quite sympathetic with the purposes of and need for the comparatively small scale public works program, Congress is apt to raise the ante to $300 million before the bill is passed.

Timed to coincide with the bill's expected passage at March's end was a survey of municipal facilities in 60-defense boomed areas, launched the month before by Director Frank Bane of the NDAC's Division of State and Local Cooperation. Thirteen city managers, loaned to the Division by their home towns, have toured the areas, tabulated needs and examined the abilities of the local governments to meet these needs financially. Their findings will undoubtedly serve as a pattern for the allocation of the defense utility dollars.

LUMBER STOCK PILE

Government has learned several costly lessons from its defense construction program; one of them is the fundamental fact that an abrupt demand for any commodity usually boosts its price. Prime object lesson in this respect was the behavior of lumber prices last fall when Government through local contractors demanded in a jiffy the 739 billion bd. ft. of lumber necessary for its camp and cantonment construction program. The wholesale lumber price, which in July had rested comfortably at 94.8 per cent of the 1926 average, jogged up to 107.1 per cent in September, finally hit 118.8 per cent in December. With the tapering off of the Government's frame construction program, the price fell off to 117.2 in February. (However the lumber industry continued to do a bulging business—at February's end, 1941 cumulative production was up 18 per cent over 1940's first nine weeks; orders were up 20 per cent; shipments were up 24 per cent.)

If and when Congress authorizes the War Department to embark on another camp and cantonment construction spree, the Army will be better prepared, will probably not skyrocket the price of lumber. Thus, month ago OPM's Director of Purchases Donald M. Nelson announced that the Army would soon purchase an "extensive" stock pile of lumber to serve as a reserve for unexpected and urgent demands. The pile will be built up with the cooperation of lumber manfacturers who will produce and store the lumber

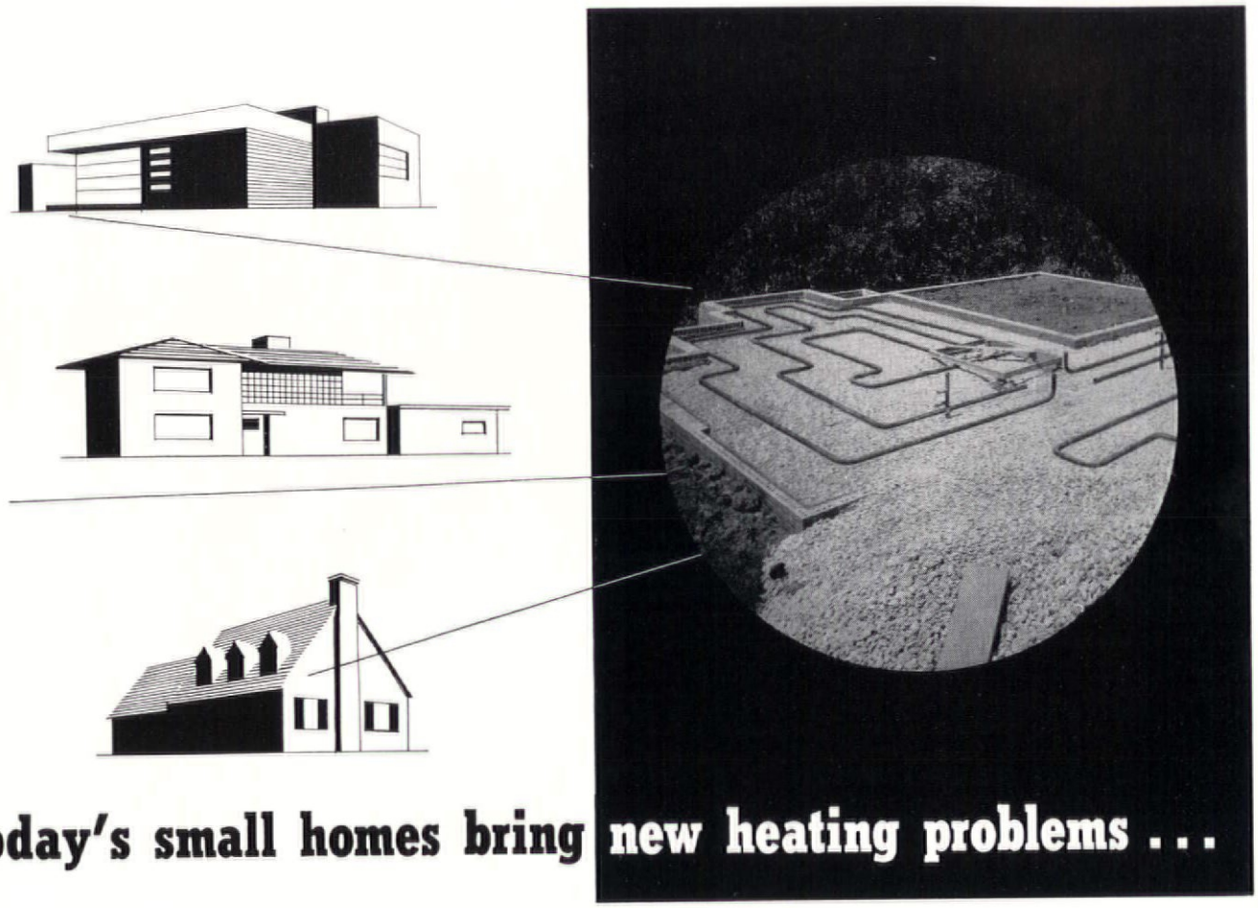


John Phillips Photos

Acme

Commissioned last month was the $44 million, 10,000 acre Corpus Christi (Tex.) Air Station, the Navy's largest, which began last July with the award of the $575,000 architectural contract to the firm of Lawrence Wood ("Chip") Robert, Jr. whose draftsmen are shown at work to the left. Construction contracts went to Brown & Root, Inc., Bellows Construction Co. and Columbia Construction Co., who, for a combined fee of $1.2 million, hired 8,600 workmen, built 480 separate buildings, including hangars for 1,000 planes. Cadet quarters under construction (center) and finished (right). A 39-mile-long temporary railroad was laid to facilitate building material deliveries.

Larger glass areas . . . no basements . . . "more house per dollar"



Today's small homes bring new heating problems . . .

will Radiant Heating solve them?

Modern trends in small home construction are bringing new heating problems, which conventional methods of figuring, and conventional equipment, may not completely anticipate and solve. For instance:

LARGER GLASS AREAS. Experience indicates that the radiant heat loss from the human body increases with the increase in glass area. Any heating system that is designed without taking this into account cannot maintain proper comfort conditions.

NO BASEMENTS, OR SMALL BASEMENTS. Heat loss through the floor is naturally greatly increased. Conventional systems can supply the extra heat . . . but will not deliver it where needed.

WHAT IS THE ANSWER? We suggest that engineers: (1) Supplement the usual methods of figuring heating jobs with radiant heating computations . . . (2) Over-engineer, rather than under-engineer, all small home installations . . . (3) select a system that will meet the demand for "more house and more modern features per dollar invested."

WHAT ABOUT THE PIPING? Where radiant heating is used, pipe has a highly responsible job, and special consideration must be given to corrosion resistance, thermal expansion, heat dissipation, and ease of fabrication. Protection against the severe corrosive conditions cannot be purchased by using low-first-cost pipe with heavy walls, or by saving on fabrication at the expense of heat dissipation. Byers Wrought Iron has demonstrated its ability to resist the corrosion encountered in radiant heating, in dozens of equivalent services. Engineering handbooks agree that wrought iron and concrete or plaster expand at identical rates, and that wrought iron has excellent heat-transfer characteristics. Ease of fabrication is suggested by reports on costs of several current wrought iron installations that show an average of 30c each for shop bends, 30c for shop welds, and 80c for field welds . . . with roughly 20% added for testing, shipping and handling. In this connection, if you are having any difficulty in locating a fabricator, we will be glad to furnish you with a list in your locality.

Do you have our new bulletin, (completely revised and expanded) "Byers Wrought Iron for Radiant Heating Installations?" We will be very glad to send you a copy.

A. M. Byers Company, Pittsburgh, Pa. Established 1864. Boston, New York, Philadelphia, Washington, Chicago, St. Louis, Houston, Seattle, San Francisco.

BYERS WROUGHT IRON

FOR EXTRA SERVICE

IN CORROSIVE APPLICATIONS

CORROSION COSTS YOU MORE THAN WROUGHT IRON

until it is called for. Prices will be determined by competitive bidding and will be paid as the reserve lumber is added to the pile. Meanwhile the Army will purchase in the usual way whatever lumber is required for current needs.

PRIORITIES

Exercising for the first time his authority to say who will get what first, OPM's Director of Priorities Edward R. Stettinius month ago put machine tools and aluminum under a rigid and formal priority status. While preference ratings on many materials and products have been assigned by various Government officials and have been voluntarily accepted by manufacturers, in no case heretofore have priority ratings been formally applied by ex-Steelman Stettinius.

Nearest this action came to the building industry was its immediate effect upon the production of refrigerators which entails the use of aluminum in ice cube trays. The Priorities Division has ruled that new refrigerators having a capacity of less than 6 cu. ft. may be equipped with only one aluminum tray of 2-lb. capacity. Boxes having a capacity of from 6 to 10 cu. ft. may have no more than 2 trays of about 4 lb. capacity, and larger boxes are limited to four trays of about 8 lb. capacity. In advising refrigerator manufacturers of this ruling, Stettinius announced that a Government research agency is now studying the possibility of satisfactorily substituting plastics and rubber for aluminum in ice trays.

Not related to the aluminum priority action, is the general industry-wide boost in refrigerator prices which has followed on the heels of the $5 price increase announced in February by the Frigidaire Division of General Motors Corp. Applying to all but its most expensive models, Frigidaire's price advance was aimed to cover increased manufacturing costs.

(Continued on page 76)

Associated Press

Dedicated in February at Savannah, Ga. was this $3.5 million Army Air Base—the first to be completed. Once a barren piece of wasteland, it sprouted 182 buildings in 90 days, now accommodates 3,500 officers and men. Goode Construction Co. and 5,000 laborers built it from the plans of Architect-Engineers Burge and Stevens and Associate Architect James Wilson.

FEDERAL DEFENSE HOUSING PROGRAM GAINS MOMENTUM

Featuring somewhat belatedly the award of contracts for the first non-Navy prefabricated houses (p. 76, col. 2), Government's defense housing program last month gathered speed, saw the allocation of funds for eighteen projects (in addition to the 196 reported on this page last month), broke ground at fourteen new sites and opened four more projects to the families of defense industrial workers and Army and Navy enlisted men and civilian employes (see tabular progress report, below).

FWA Funds. Working with $140 million of Lanham Defense Housing Act money plus $45.8 million from the Army, the Federal Works Agency logically accomplished the most during the month because it has the biggest assignment. To its pet sub-agency, the Public Building Administration, FWA allocated funds for a dozen new projects, bringing its total to 105. Two of PBA's projects are at least partially completed; 51 others are under construction. U. S. Housing Authority was given charge of a half dozen new projects, swelling its total to 33, two of which are under construction. Farm Security Administration took down one additional project, and, for the first time, FWA funds were allocated directly to local housing authorities without USHA acting as the middleman. These new direct agents of the Federal Government are located in Akron, Cleveland and Washington and were assigned projects of 300, 350 and 200 dwelling units respectively. Aim of this new departure is to cut red tape delays.

USHA Funds, appropriated several years ago for slum clearance and low rent housing purposes, have been drafted "for the duration" to cover the cost of 23 defense projects. Most of the projects were either planned or abuilding when the emergency was officially declared, and this part of the program is therefore well advanced—2,364 dwelling units in eight projects are ready for occupancy. The total jumped 837 units last month when a completed slum clearance project in Boston was inducted into the defense program.

NAVY Funds, all $50 million of them, were allocated several months ago for the construction of 45 projects. Hence the apparent lack of Navy housing progress in the tabulation below. Progress indeed, however, is shown by the fact that the Navy month ago had 626 dwelling units in eight projects ready for occupancy—almost twice as many as in the four-times-as-big FWA-financed program.

DHC Funds. Since the defense housing program carried on by RFC's subsidiary, the Defense Homes Corp., is essentially a lending operation, its record is not shown in the following tabulation of Government-financed projects. DHC possess only $10 million of Federal cash with which to supply the 20 per cent equity investments required for FHA-insured large scale rental housing projects; balance of the cash comes from RFC via mortgages which, it is hoped, will eventually be purchased by private bankers. DHC now has thirteen projects, containing 2,800 dwelling units, abuilding in as many defense-boomed communities in the East, South and Middle West. Many are being prefabricated.

FEDERAL DEFENSE HOUSING

Progress by dwelling units (and projects) — Feb. 8-Mar. 8

FWA FUNDS allocated to	Officially approved		Under construction		Opened for occupancy	
	February 8	March 8	February 8	March 8	February 8	March 8
PBA	23627 (93)	25940(105)	10197 (43)	12331 (53)	35 (1)	330 (2)
USHA	11550 (27)	11905 (33)	(0)	340 (2)	(0)	(0)
FSA	1200 (2)	1350 (3)	(0)	(0)	(0)	(0)
FWA	1650 (4)	1500 (3)†	(0)	500 (1)	(0)	(0)
LHAs *	(0)	850 (3)	(0)	(0)	(0)	(0)
NAVY	2300 (3)	1000 (1)†	1000 (1)	1000 (1)	(0)	(0)
TVA	250 (1)	250 (1)	(0)	(0)	(0)	(0)
TOTAL	40577(130)	42795(146)	11197 (44)	14171 (59)	35 (1)	330 (2)
USHA FUNDS #						
USHA	6310 (19)	7217 (21)	5110 (17)	6583 (18)	1016 (6)	2220 (7)‡
NAVY	1200 (2)	1200 (2)	1200 (2)	1200 (2)	144 (1)	144 (1)
TOTAL	7510 (21)	8417 (23)	6310 (19)	7783 (20)	1160 (7)	2364 (8)
NAVY FUNDS						
NAVY	14610 (45)°	14630 (45)	14535 (43)°	14535 (43)	340 (6)	626 (8)

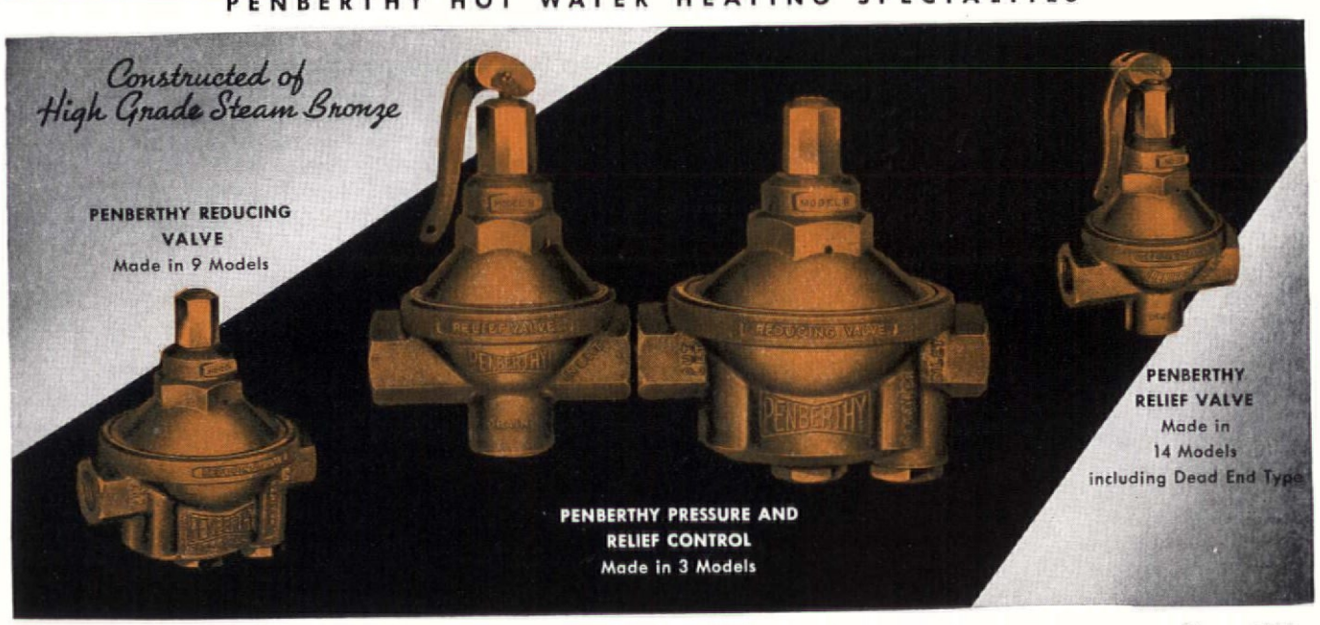
FOOTNOTES: Figures in parenthesis represent the number of projects in each category.
* Local housing authorities without USHA assistance.
† Decrease caused by a reallocation or withdrawal of funds.
# Many of these slum clearance funds were allocated prior to the national emergency.
‡ A completed 837-unit USHA project was acquired from the Boston Housing Authority.
° Revised figures.

Thrifty

YOUR client gets a superior product at an attractive price when you specify one of the units shown above to keep his basement free from seepage water—or the specialties shown below to modernize his hot water heating plant. Thrifty clients particularly appreciate these thrifty products.

Penberthy Products are carried in stock by jobbers everywhere.

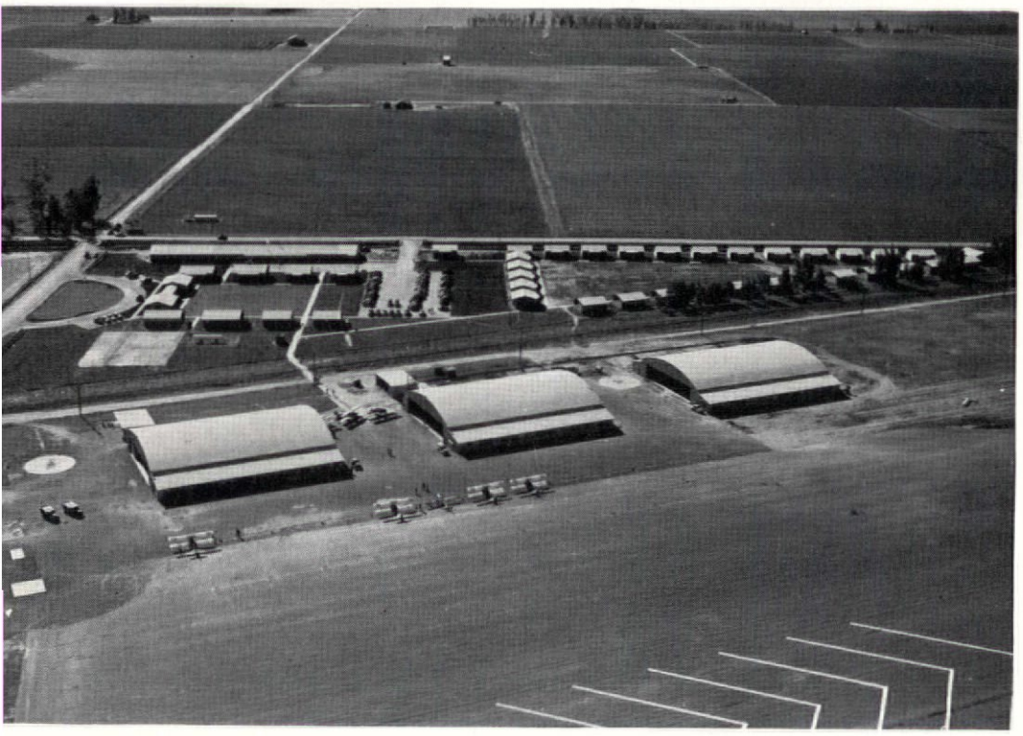
PENBERTHY HOT WATER HEATING SPECIALTIES



PENBERTHY INJECTOR COMPANY *Manufacturers of* QUALITY PRODUCTS *Since 1886*
DETROIT, MICHIGAN • *Canadian Plant,* Windsor, Ont.

BUILDING FOR DEFENSE ..BOOM IN PILOT TRAINING CENTERS

keynoted by Ryan School's $250,000 California defense project. Architect Frank L. Hope, Jr. designs high-standard quarters for 240 Air Corps fledglings.



Potent cogs in the educational machinery set up to transform raw recruits posthaste into skilled military pilots are the private flying schools. On them the War Department leans heavily for support in boosting output to the scheduled 12,000 men a year. Twenty-eight are now under contract to take in flying cadets for ten-week stretches of high-powered prepping before they are moved on to Air Corps training centers for more advanced instruction. For the schools, this new assignment means a new set of production headaches. Already operating with capacity enrollments in their regular commercial classes, they have had to enlarge their plant facilities generally —with the costs coming out of their own jeans. Accordingly, this month THE FORUM looks over this private building boomlet, selects as a case study the Ryan School of Aeronautics, fast-spawned, fast-growing, $250,000 branch elementary training school in southern California's Hemet Valley.

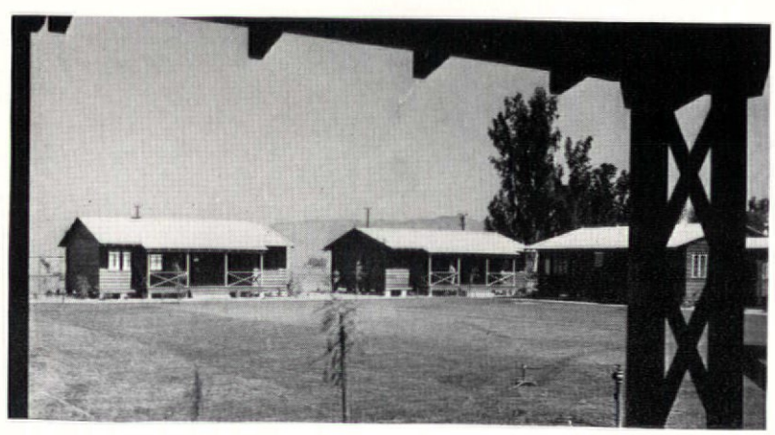
Last summer Ryan's main school plant in San Diego was enlarged to receive 65 flying cadets every five weeks in overlapping double quotas. This represented its limit of efficient expansion. Under pressure to accommodate a greater flow of cadets demanded by the Air Corps' increasingly voracious program of primary flight training, Ryan officials decided to establish the separate branch school. A desirably flat 320-acre farm tract three miles from Hemet was obtained for a nominal rental. Barns were knocked down, trees uprooted, the ground rolled and oiled into a smooth landing surface. Building plans were drawn by San Diego's Architect Frank L. Hope, Jr., construction started by San Diego's Builder L. T. Olmstead. In mid-September, after 37 days' work and a week ahead of schedule, the first contingent of 70 cadets was stationed at the field.

Less than a month after the branch school's dedication, further expansion was

(Continued on page 94)

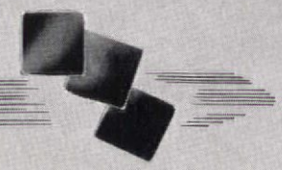
MESS HALL AND RECREATION LOUNGE

BARRACKS

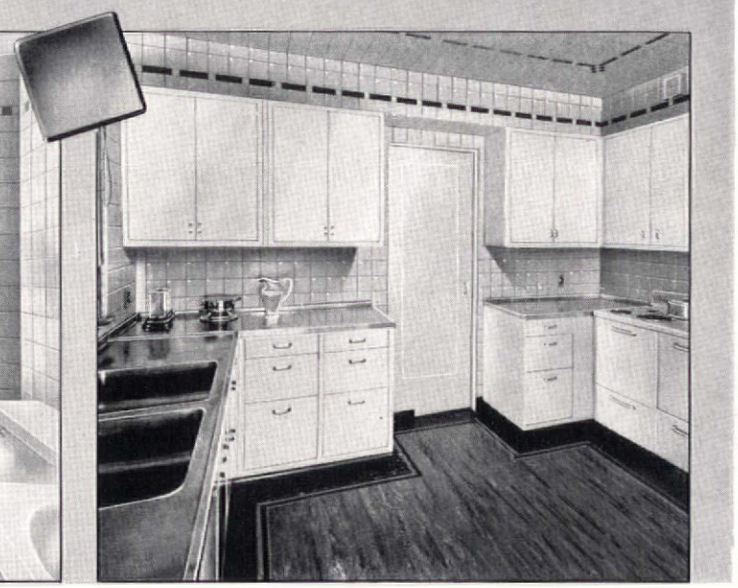


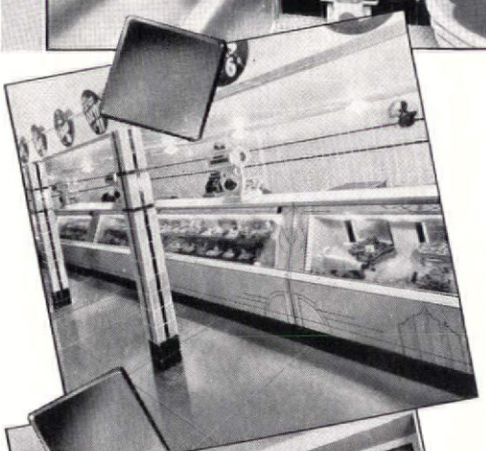
CLASSROOMS

The WALL of Today



VEOS *Porcelain Enamel on Steel* TILE





• Veos is not offered as a substitute for conventional clay-bodied tile, nor is it in the price range or comparable with synthetic surface-painted wall boards and other inferior wall covering. Veos is an improved wall tile, moderately priced, that provides in a glass-smooth surface of genuine porcelain enamel, the same high glaze and delicate colors of fine ceramics.

Veos will last as long as the wall to which it is applied, and carries an unqualified 25-year guarantee against surface crazing, cracking, or color fading. Installation is simplified with Veos. A patented self-locating foundation sheet eliminates expensive wall preparation, insures perfect alignment of every tile and saves time in application. It also provides ½" of standard thermal insulation.

A Veos installation saves 75% in weight. Ideal for ceilings as well as walls. Six standard sizes of tiles and ten pastel colors at no cost over black and white, permit unlimited use of color and ornamental design. In remodeling work, Veos is installed right over existing walls, without muss, fuss, or litter—and in less time than it takes to do a good paint job. Veos is proving its many advantages in millions of square feet of installations.

If no Veos dealer is in your immediate locality (see classified telephone directory), write us for complete data.

DAVIDSON ENAMEL COMPANY, Dept. A, CLYDE, OHIO

The Artistry of Ancient Ceramics PLUS *the Permanence of* MODERN STEEL

BUILDING FOR DEFENSE . . . EMERGENCY HOUSING PROPOSALS

by Edith Elmer Wood. A public housing expert stumps for more dollars, more speed, rent control and more Government.

Widely and favorably known as an authority on public housing is Dr. Edith Elmer Wood. Her analysis of certain aspects of the defense housing situation and her proposals for dealing with them will command attention although not universal agreement.

With something short of objectivity, Dr. Wood finds that private enterprise, "in spite of the coddling given it," cannot play any part in defense housing. THE FORUM *has previously pointed out that to date nothing has been done to "coddle" private enterprise, that, on the contrary, Government agencies have had every encouragement and, particularly in the case of PBA, have failed to deliver. Before private enterprise can be indicted as useless in the defense housing program first let it be given a chance to operate at less risk than under normal conditions, but with a proper measure of control over standards and direct relation to local defense housing needs.*

"Rent freezing," another of Dr. Wood's proposals, must be considered a possibility. Both Great Britain and Canada long ago adopted this course. Canada now finds that it throttles new building. Although its legality has been sanctioned by the U. S. Supreme Court, rent control poses numerous and delicate problems. Its use must be reserved for extreme situations and its administration will challenge the sagacity of any local Solomon.—ED.

Hitler's best chance of world domination hangs on the continued failure of American defense housing to keep step with American industrial expansion.

First Failure: To synchronize home building with plant building.

Our becoming the Arsenal of Democracy in time to save the last strongholds of democracy depends on record-breaking speed in organizing our defense industries for mass production and on maintaining production in increasing volume as long as may prove necessary. Engineering skill is required for the first. The morale of the workers will determine the second. The double task is in line with American genius and temperament. The chances for success should be good if it were not for housing.

If 50,000 airplanes are needed, or 200 cargo ships, or 20,000 tanks, our industrialists figure out plant expansion to the last square foot and the time required for its construction to the day. They list the tools and machinery, the raw materials and labor which must be assembled on the day the plant is ready. Each item is fitted to the time table. But housing for transplanted workers—comfortable, healthful, cheerful housing, at reasonable rents, ready for them on the date at which their work begins (not a year later) has not even yet been visualized as an essential link in the chain of all-out production.

Back in the first World War, the General Manager of the Newport News Shipbuilding Company told a Senate Committee that the year's output in merchant vessels was going to be about 3,000,000 tons instead of the hoped-for 8,000,000, because of fantastic labor turnover resulting from the lack of decent housing. The Vice President of the U. S. Housing Corp., a World War I agency, told a National Housing Conference in Boston that no one would transport tens of thousands of horses from one place to another without knowing that good stables were built and ready for them, but men had been expected somehow to shift for themselves. The war might have been lost in consequence if the Kaiser's empire had not collapsed from other causes.

Second Failure: To profit by the lesson of 1917-1918

The lesson of that American experience is clear as crystal. Private enterprise will not produce housing for an emergency of uncertain duration. After a year of futile waiting, finding production crippled by its failure, Congress authorized the Shipping Board to provide housing for shipyard workers. After waiting five more months, while similar crippling of other war industries took place, it authorized the U. S. Housing Corp. in the Department of Labor to build for them. The speed, quality and quantity of work done by both agencies as soon as they were permitted to function and until they were halted by the Armistice established a creditable record. The efforts of certain real estate groups, in and out of Congress, to smear that record at the time and to befog it since have not been creditable.

The trustees of the Twentieth Century Fund appointed a special committee and staff last spring to report on the general housing situation in the U. S. Because of swiftly moving international events, it was decided to postpone the main study and prepare a report on "Housing for Defense." The public assumed that it would be objective, authoritative and motivated solely by a desire to aid national defense. Instead, as the foreword frankly states, "the report is based upon the assumption that private interest must play the major role in meeting the problem of defense housing and that the Government itself should directly engage in construction only when private action is inadequate to cope with the situation." In other words, the recommendations of the Committee were not based on study of the assembled facts, but facts were assembled to support a predetermined thesis. The publication thus becomes sublimated propaganda for the National Association of Real Estate Boards and allied groups.

The Committee's own facts, though limited in scope, point clearly to the conclusion that the Government should have started building houses a year earlier than it did and that tragic results followed its failure to do so. The Committee draws no such conclusion, but tells us that it has "kept in mind the purpose underlying our decision to arm—the defense of our institutions. It has sought to find methods that would avoid the necessity of abandoning these institutions in the process of attempting to preserve them." Presumably, the Committee would favor conserving both the Bill of Rights and the Real Estate Board—but the Real Estate Board certainly.

Instruction to mothers in case of fire: If possible carry the baby under one arm and the canary birdcage under the other. But in no event, abandon the birdcage.

The Defense Housing Coordinator, whose office was established late in July, ostensibly to speed defense housing, has always maintained complete agreement with the ideology of the Twentieth Century Fund's Housing Committee. Of an estimated 200,000 new family units needed for defense housing, he has said repeatedly that the Government would provide at most 80,000, while private enterprise would build at least 120,000. The Government would build only when (i.e. *after*) private enterprise had shown that it could not or would not act. How much precious time must be presented to Herr Hitler in each case before the government agencies are allowed to function has never been stated. It is demonstrably considerable.

In an address before the American Institute of Planners on January 25, the Coordinator said: "Some people do not like private real estate operators, others do not like to see the Government barging into the real estate business. *But this is no*

(Continued on page 98)

PORCELAIN ENAMELED WALLS IN COLOR, *MR. ARCHITECT*

AN EASILY INSTALLED, PERMANENTLY BEAUTIFUL BATHROOM WALL FINISH

Ing-Rich

PORCELAIN WALL PANELS

PORCELAIN WALLS IN COLOR

Now, an easy to use bathroom wall finish that installs a whole sheet at a time, offers lustrous, permanent colors to harmonize with modern fixtures and combines the structural soundness of steel with the permanent, stain-resistant finish of porcelain.

MEETS EVERY REQUIREMENT

Ing-Rich Porcelain Wall Panels meet every requirement completely—**first,** beauty in six permanent, fade-proof and stain-resistant colors, green, cream, blue, yellow, black and white—**second,** adaptability to all types of construction plus provision for adjustment to minor framing inaccuracies—**third,** adaptability to all types of decorative moulding and wall accessories—**fourth,** a simplified installation method that can be handled by any competent workman in a minimum of time—and **fifth,** a complete absence of need for refinishing.

WHY NOT HAVE COMPLETE DATA AT HAND?

It will be interesting to read the details of this new product, see examples of its use, check over the simplified installation method as described in the new descriptive bulletin, "Ing-Rich Porcelain Wall Sheets." Why not send in the coupon below and obtain this information for your files? There is no obligation . . . no salesman will call.

Mail Coupon for Descriptive Bulletin

Ingram-Richardson Manufacturing Co., Beaver Falls, Pa.

Name.....

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Please check one or both

☐ I am engaged in group or apartment housing

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Ing-Rich

INGRAM-RICHARDSON MANUFACTURING CO.

BEAVER FALLS, PENNA.

BUILDING FOR DEFENSE ... PREFABRICATION TAKES NEW SHAPE

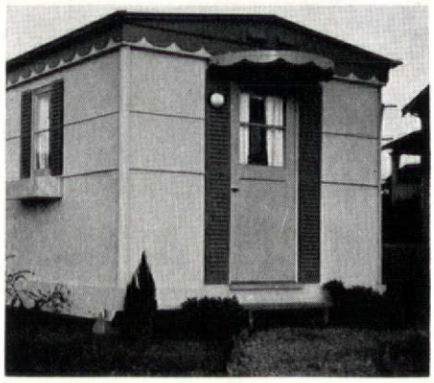
to permit 100 per cent factory assembly and mobility. Realtor Allison Dean produces a three-room model for $1,800 f. o. b. Portland, including everything but the groceries.

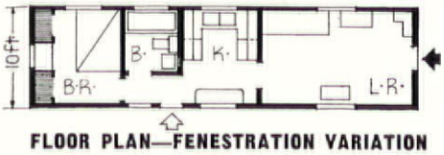
With national defense came the initial and somewhat overworked Government demand for temporary housing to serve the industrial, military and naval centers whose population will diminish with the passing of the emergency. Backed up with millions of defense housing dollars, this demand has prompted many a private enterpriser to scratch his head and solve the problem with anything from steel, igloo-like buildings (ARCH. FORUM, Feb. 1941, p. 87) to plywood panel houses put together with double-headed nails (ARCH. FORUM, Mar. 1941, p. 176). In Portland, Ore. a new and different solution to the temporary housing problem was recently unveiled as Realtor Allison H. Dean rolled a completely finished and furnished three-room house out of his plant, announced that it would be marketed for $1,800 f.o.b. any Portlander's level lot. Sturdy and readily moved, the so-called "Haul-a-Way Home" is a significant experiment on several counts, is a strong contender for some of the $5 million appropriated by Congress last month for dormitories and mobile housing, primarily trailers.

One of Portland's biggest and busiest realtor-subdividers (ARCH. FORUM, Jan. 1939, p. 65), President Allison H. Dean of Homes Inc. developed his unusual house strictly from an engineering standpoint, with the design assistance of Ira Washburn and the exterior treatment suggestions of AIArchitect Roscoe Hemenway. The house contains no studs, no rafters, few other structural details used in conventional construction. King pins in its patented construction system are three fir plywood and lumber trusses—two 9x40 ft. wall trusses which support a 10x40 ft. roof truss. Wall trusses are comprised of light struts and braces secured in place by large plywood wall panels which act as gusset plates. The plywood ceiling is the lower chord of the insulated roof truss. When put together and bolted to a one-piece oak-finished floor section, the structure becomes, in effect, a square bridge girder of considerable strength. (When suspended for delivery between a truck tractor and dolly—see cut—deflection of the "girder" is claimed to be negligible.)

Designed to fit handily on a truck for short highway hauls and a flatcar for longer railway hauls, the standard house is 10 ft. wide and long enough (40 ft.) to contain three minimum size rooms and a bath arranged in tandem—10x16 ft. living room, 10x8 ft. kitchen, 8x5 ft. bath and 10x9 ft. bedroom, the latter containing two built-in closets, a dressing table and double bed with drawers beneath. In an optional arrangement of the same space at the same price the kitchen is at the "front end" of the house, thus eliminating corridor space and increasing its usable floor area. Numerous other plan

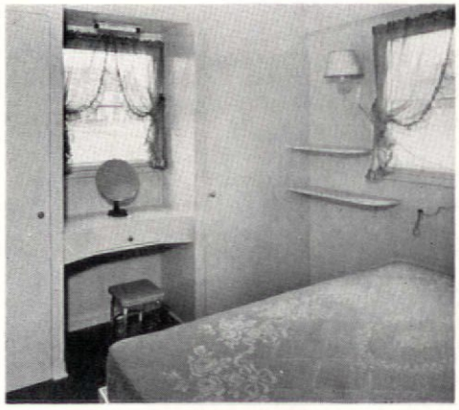
(Continued on page 110)





FLOOR PLAN—FENESTRATION VARIATION

LIVING ROOM



BEDROOM

KITCHEN

Columbia Com'l. Co. Photos

VLADIMIR OSSIPOFF, ARCHITECT, HONOLULU, T.H.

The Charm of Wood is Its Kin to Nature

OF all the woods that so richly endow America with protection and shelter, Red Cedar Shingles superbly meet the challenge of all architectural requirements for pitched roof construction. Genuine Red Cedar Shingles offer you good insulation, complete protection from the elements, long life at low cost and minimum upkeep.

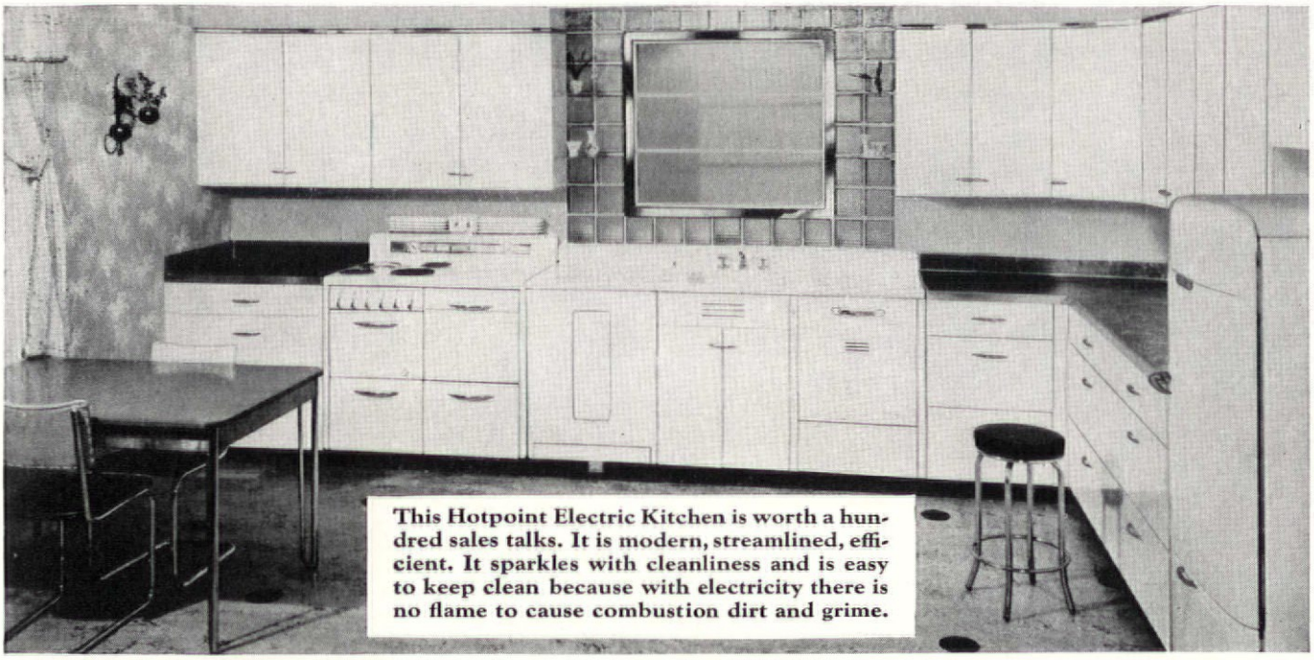
Like Feathers on a Bird

CERTIGRADE

Red Cedar Shingles

Certigrades pass office inspection for grade and quality.

Sold only by established lumber dealers.



This Hotpoint Electric Kitchen is worth a hundred sales talks. It is modern, streamlined, efficient. It sparkles with cleanliness and is easy to keep clean because with electricity there is no flame to cause combustion dirt and grime.

The HOTPOINT ELECTRIC KITCHEN As A Powerful Sales Aid!

HOTPOINT ELECTRIC RANGE with new Calrod Units provides MEASURED HEAT cooking. Starts faster, cooks more economically, clean, safe, durable, dependable. Many other great features.

AUTOMATIC HOTPOINT ELECTRASINK banishes dishpan and messy garbage pail. Kitchen Waste Exit flushes food waste away quickly. Automatic dishwasher saves hands by washing dishes at the press of a button.

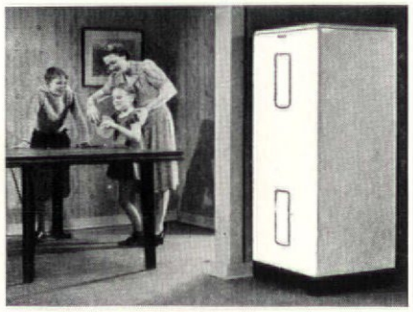
WHEN prospects step into the kitchen of one of your homes, what do they see—equipment that is destined to be outmoded in a few years? —or all-electric kitchens that will enhance the value of the property and save time, steps and labor for years to come?

A good way to sell prospects is to show them modern all-electric kitchen units with Hotpoint Range, Refrigerator, Water Heater, Cabinets, and Automatic Electric Dishwasher or Electrasink. Scores of leading realtors say that a truly modern Electric Kitchen is the first thing to attract a woman's eye—the surest way to cinch a sale—the logical way to get a better price. Hotpoint Kitchens are inexpensive; easy to install. We'll gladly cooperate with architects, contractors, and builders on planning. Edison General Electric Appliance Co., Inc., 5651 West Taylor St., Chicago, Ill.

Hotpoint

REFRIGERATORS • RANGES • WATER HEATERS • WASHERS AND IRONERS • CLOTHES DRYERS • AUTOMATIC DISHWASHERS • ELECTRASINK • STEEL KITCHEN CABINETS

HOTPOINT REFRIGERATOR brings advanced features of electric refrigeration such as: 7 Food Storage Zones, New Butter Conditioner, Measured Humidity, and scores of other advantages.



HOTPOINT WATER HEATER can be installed anywhere; closet, kitchen or basement. Provides 24 hour hot water service for a few pennies a day. Clean because it's flameless. Completely automatic, dependable and safe.

KOOLSHADE* SUN SCREEN PUTS THIS WHOLE BUILDING "IN THE SHADE"

and sun heat through windows is cut as much as 85%

EXCEL APARTMENTS • CLEVELAND, OHIO

• KOOLSHADE is a fine-mesh bronze fabric, made like a tiny venetian blind . . . framed and installed like an ordinary screen . . . keeps out insects, too!

Even when the hottest summer sun beats against these windows every room in the building seems like a cool "North" room!

• Last year every one of the two hundred sun-exposure windows in this big Cleveland apartment building was equipped with KOOLSHADE Sun Screen. The summer went by with plenty of hot days to give both the tenants and the owner a chance to see what a difference KOOLSHADE makes by keeping the sun heat outside. After this experience, Mr. W. A. Jones, the owner, wrote: "Refer any of your prospective customers to me. KOOLSHADE Screens have proved 100% satisfactory. They do all you claim, and more."

Time after time—in homes, offices, hotels, hospitals and industrial buildings—test installations of KOOLSHADE have shown temperatures lowered by 10°, 15° and even more during the hottest weather. At the same time, living and working conditions were greatly improved by the elimination of sun glare.

• There are KOOLSHADE Sun Screen Distributors in all principal cities, with competent representatives ready to counsel with you on all problems of application, framing and installation. (In Eastern Canada, Distributed by Creswell-Pomeroy, Ltd., Montreal.)

• *Isaly's Lunch Room, Canton, Ohio.* Note how KOOLSHADE stops sun heat and sun glare; does not spoil view.

• *Abbott Laboratories, N. Chicago, Ill.* First tested on one office, KOOLSHADE was installed on a whole floor—with more to be added.

Ingersoll

KOOLSHADE*

"It's Cooler in the Shade" **SUN SCREEN**

Ingersoll Steel & Disc Division, Borg-Warner Corporation, Dept. F4
310 So. Michigan Ave., Chicago, Illinois
Please send your SUN HEAT DEMONSTRATION KIT (without charge) and also complete KOOLSHADE Sun Screen literature.

Name .....
Firm .....
Address .....
City ..... *State* .....

* Trade Mark . . . Property of Ingersoll Steel & Disc Division, Borg-Warner Corporation

ALUMINUM, DEFENSE, AND YOU

1

WE INTERRUPT our regular messages to report what's what with aluminum.

AT THE MOMENT delivery for civilian use must make way for defense. Everybody knows the reason. Defense requires and is using more aluminum per month than peacetime America ever consumed.

NEVERTHELESS, we intend that no one shall have to forego the things aluminum can do best one minute longer than we can help.

THERE IS NO SHORTAGE of bauxite, nor of anything else, except time. And Father Time is being given the race of his life.

WE ARE MOVING, for example, 35,000 yards of earth a day at Alcoa, Tenn., to get 50 acres under a single roof by September. It will require 193 carloads of roofing felt. Some of the operations in that plant will start even before the walls are up. That's an annual rolling capacity for 120 million pounds of high strength alloy sheet coming along fast.

LAST MARCH WE STUCK the first shovel in a cow pasture near Vancouver, Wash. In September a 30 million pound plant was delivering metal. It has been doubled, already. A third 30 million pound unit starts delivering in April; a fourth in May; a fifth in June. From cow pasture to 150 million pounds annual capacity in 15 months.

A SIDELIGHT: To make that 150 million pounds of aluminum, we first have to build factories to make 120 million

pounds of carbon electrodes. We have to obtain the equipment (transformers, rectifiers, and the like) to feed 162,500 kw. of electricity into the reduction furnaces. This is a generating capacity equal to that of the state of Delaware plus twice that of Mississippi.

WHAT OF TOTAL PRODUCTION? In addition to Vancouver further installations are being made at other of our plants, so that in less than a year their total capacity will be more than double that of 1939, when 327 million pounds were produced.

IN THE VERY MIDST of this demand we have lowered the price of aluminum ingot 15%. We state, without reservation, our hope that the price can be still further reduced.

DEFENSE APPLICATIONS use aluminum for exactly the same reasons you do. Defense priorities on aluminum simply say that there are some fundamental things that aluminum does supremely well. It will do them still better as important lessons in production, fabrication, and application are learned from every additional pound being produced and used.

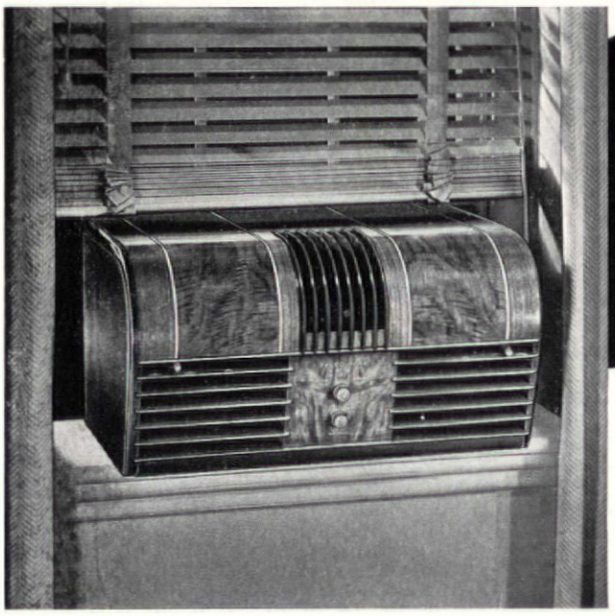
YOU, SIR, have been using aluminum windows and sills, copings, spandrels and doors. It has been a favorite decorative material. It is not easy nor convenient to have to substitute other materials temporarily. We want you to know that we intend to make this hardship as short-lived as possible. Your aluminum is on the way. It is a promise.

ALUMINUM COMPANY OF AMERICA

ALCOA ALUMINUM

Here's Complete, Efficient Air Conditioning for the Home

at a price the public can pay!



MODEL 76-A *(Illustrated)*

PHILCO-YORK Single-Unit AIR CONDITIONERS

Here's the long-awaited answer to air conditioning for individual rooms in home and office . . . the Philco-York Single-Unit Air Conditioner. Real, full-fledged air conditioning . . . at new low prices, well within the reach of the modest budget!

There's a new, quality-built Philco-York Air Conditioner for every size room. Easily and quickly installed . . . no plumbing . . . no pipe connections . . . no extra wiring necessary. No technical problems or expense. Simply plug it into any electric socket.

- Cools and Conditions Room Air.
- Dehumidifies. The moisture is wrung out of the air, leaving it cool, dry, stimulating.
- Draws in Fresh, Outside Air.
- Filters Out Dirt, Dust and Pollen. A boon to hay fever sufferers!
- Circulates the Air.
- Shuts Out Street Noises.
- Removes Stale, Stuffy Inside Air.
- Gives Pure Air All Year 'Round.

THERE'S A PHILCO-YORK AIR CONDITIONER FOR EVERY SIZE ROOM, NOW PRICED AS LOW AS

$129.50

Increase Saleability of Homes!

Now, contractors and builders can increase the saleability of their houses by including this low-cost air conditioning in the specifications. Architects can bring their clients the comfort and satisfaction of air conditioning at a new low price! For full information on the Philco-York Air Conditioner, contact a Philco distributor or mail the coupon!

MAIL THE COUPON NOW!

Philco Radio & Television Corporation, Dept. 564
Tioga and C Sts., Philadelphia, Pa.

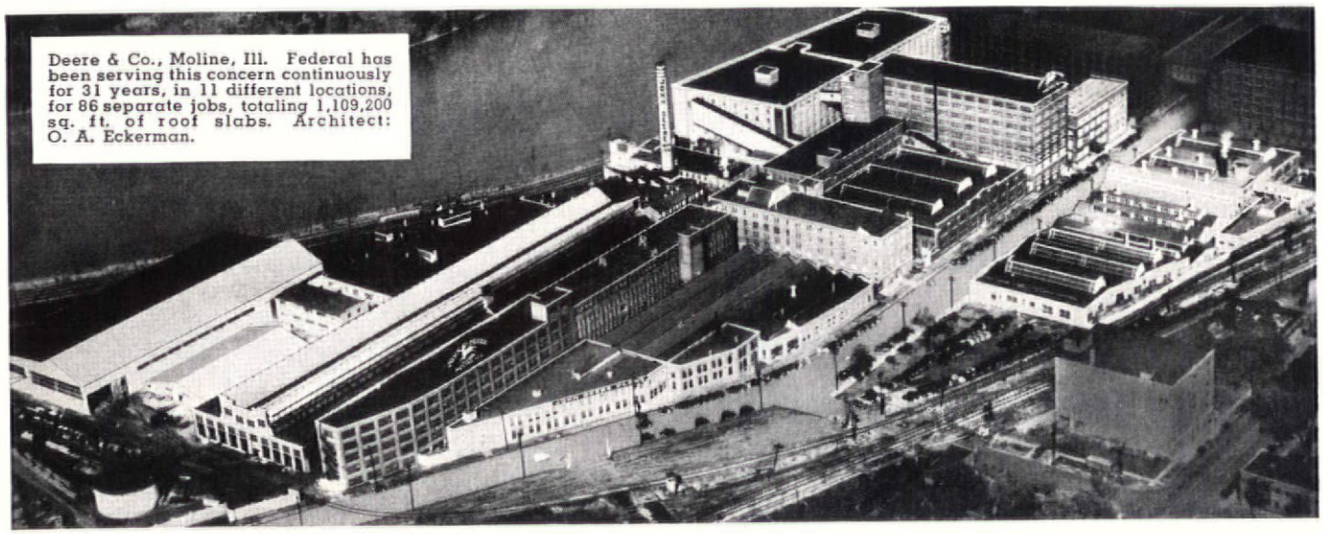
Please send me full details and specifications on Philco-York Air Conditioners, together with Discounts and Special Wholesale Credit Terms. Also send me big, new Illustrated Booklet.

Name .....

Business .....

Street ..... County .....

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



Deere & Co., Moline, Ill. Federal has been serving this concern continuously for 31 years, in 11 different locations, for 86 separate jobs, totaling 1,109,200 sq. ft. of roof slabs. Architect: O. A. Eckerman.

IT ALL ADDS UP TO *EXPERIENCE

Featherweight PRECAST CONCRETE ROOF SLABS

The testimony of Deere & Co. and many other customers, provides the ***convincing proof of experience*** that a FEDERAL ROOF DECK is the soundest possible roof investment.

There is absolutely no maintenance — no painting, repairs or replacements, during the entire life of the building. Precast Concrete cannot rust, corrode, disintegrate, rot or burn.

The picture at the left shows the attractive underside of a Federal Roof Deck which requires no decorative or protective treatment.

For Over 30 Years — Offices in Principal Cities.

EMERGENCY BUILDINGS

that are planned now for temporary service, are frequently used later for permanent industry. A Federal Roof installed now, will not only be safe and economical for the present, but will be ready for permanent occupancy any time in the future, *without repair or replacement.* This is fact, proven by experience.

FEDERAL-AMERICAN CEMENT TILE CO.

608 So. Dearborn St. - Chicago, Ill.

Read the — EVIDENCE..

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3244 N. CICER
Chicago, Ill
AVENUE 55

May 14, 1940.

Mr. McCray,
Paine Lumber Company,
Oshkosh, Wisconsin.

Dear Mr. McCray:

Our firm has been experimenting recently with the installation and finishing of Rezo doors. I thought you might be interested in knowing some of the results.

Although the carpentry involved in the installation of your doors shows practically no difference compared to the former six panel door that we had been using, there is a substantial saving in the painting of the doors. Figuring it on the basis of a three coat painting job, we found to completely finish the Rezo door, the time was 37 minutes, and on a six panel door, the time was 72 minutes, almost double. There also was a slight difference in the amount of material used, amounting to three-fourths of a gallon of paint less on the Rezo doors for sixteen doors.

Of course the reason that we had given up the six panel door originally was the question of service and maintenance after completion. On practically all of the panel type doors, where they were painted, we found that because of humidity desired in a modern house today, that this caused a contraction and expansion of the panels along the stiles, and practically every panel door job that we had required touching up by painters after completion. This annoyance and nuisance, together with the factor that our client will have lower maintenance cost in the future, was really the basis for our deciding to use Rezo type doors exclusively.

Hoping that this information might be of some interest to you, I am

Yours very truly,
WM. JOERN & SONS
By Charles E. Joern

CEJ:OJ

Mr. Chas. E. Joern is chairman of the taxation committee of the Chicago Real Estate Board—is a member of the Chicago Board of Underwriters and a director of the Chicago Building Congress.

Mr. Joern is nationally known as an important member of the real estate and building industry. His company was awarded the contract to build the LIFE Magazine fostered home in 1939 and also in 1940 in the Chicago Area.

ESTABLISHED OVER A QUARTER OF A CENTURY

REZO FLUSH DOORS *the* ONLY *cell-type door, with* YEARS *of* EXPERIENCE

REZO

PATENTED FLUSH DOORS

U. S. No. 1,887,814

this *Saving* in LABOR and MATERIAL permits the use of guaranteed

REZO FLUSH DOORS

at the same installed cost as common multi-panel doors

Manufactured by **PAINE LUMBER CO., Ltd.,** *Oshkosh, Wis.*

THE TEST

tells how paint sticks to this galvanized metal

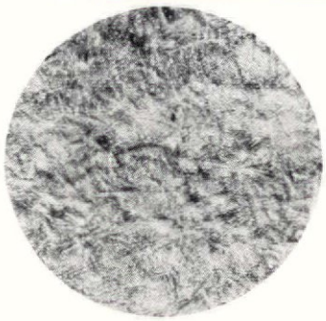
The SCRATCH TEST shows how ARMCO Galvanized PAINTGRIP Sheets hold paint. Half the sample was PAINTGRIP-treated. On the other half the galvanized coating was left untreated. Then the sample was painted and permitted to "age." Observe how the paint over the untreated galvanized section flaked under the knife. Then note how difficult it was to scrape the paint off the PAINTGRIP-treated section.

WHY is this test of interest to architects and other building men? You may be considering the roof-drainage system for a house — or air-conditioning ducts to be painted. Ordinary galvanized metal is usually acid-etched before painting and this sacrifices some of the galvanizing. The usual zinc coating also tends to dry out paint oils and cause early peeling.

But ARMCO Galvanized PAINTGRIP Sheets have a special *bonderized* film that insulates the paint from the galvanizing and preserves it. Exposure tests show that good paint lasts at least 150% longer on PAINTGRIP than on ordinary galvanized metal. And the work can be painted *immediately*.

Use ARMCO PAINTGRIP Sheets for metal roofs, roof-drainage, for exposed air-ducts, for furnace casings . . . wherever you want the accepted protection of galvanizing and the added protection and beauty of paint.

Write for a free SCRATCH TEST sample and a copy of our descriptive folder for building men. The American Rolling Mill Company, 970 Curtis Street, Middletown, Ohio.

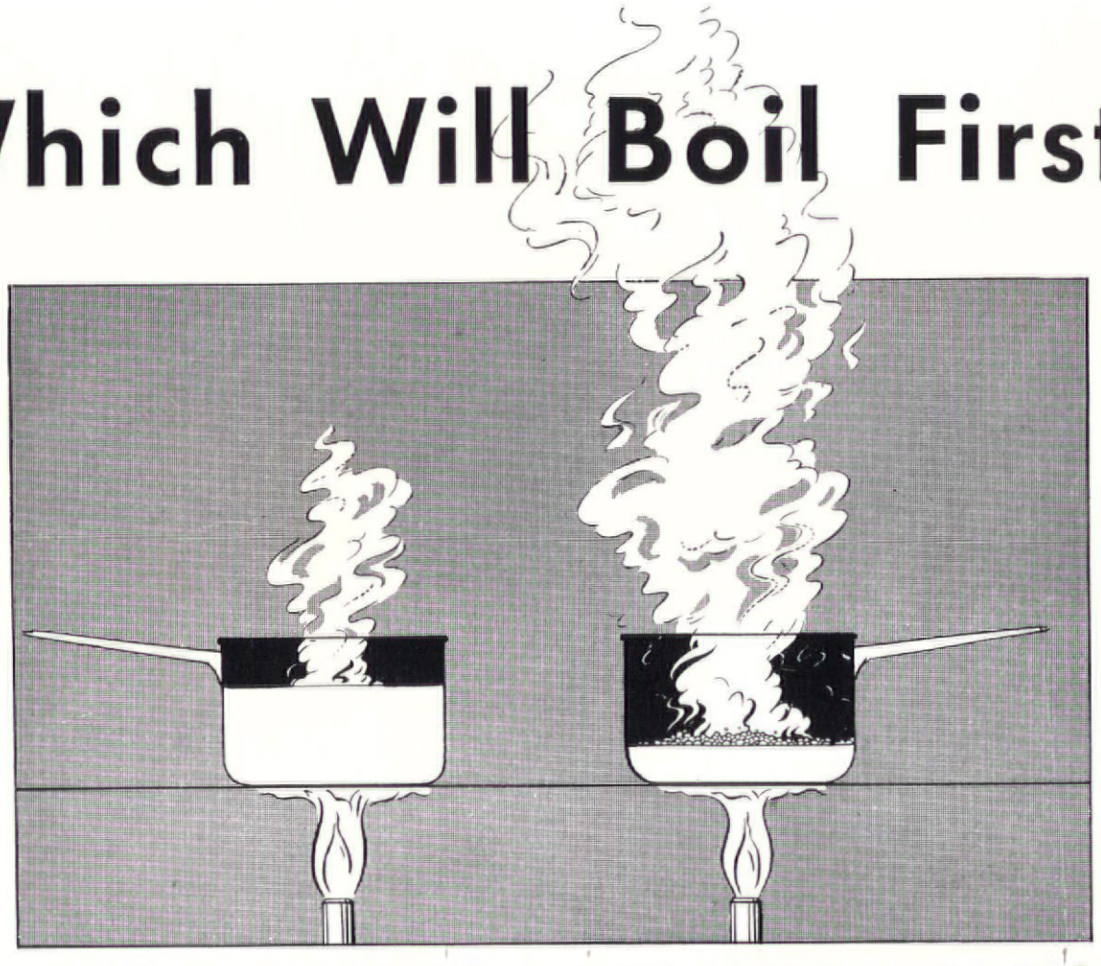


• *This photomicrograph, at 40 diameters, shows the mat-like surface of the mill-applied bonderized finish. It not only takes paint but preserves it!*

GALVANIZED ARMCO INGOT IRON PAINTGRIP

ARMCO PAINTGRIP SHEETS

Which Will Boil First?



WHAT THIS PROVES ABOUT PACIFIC BOILERS

CORRECT water content, whether in a kitchen vessel or a heating boiler, means quick steaming and economical firing. Pacific boilers, with their correctly proportioned water content, are 20% to 30% quicker on the "getaway" in the morning than other firebox boilers. They save fuel at the time of forced firing when other boilers are wasting it.

At night, when fires are banked, the Pacific's water content is sufficient to continue to supply heat to the radiators for as long a time as a boiler with 50% greater water content. On the other hand, in the morning no fuel is wasted in heating an oversized water content — heat that is unnecessary.

Owner, tenant and fireman profit when a Pacific is installed. The owner saves fuel, the tenant is assured of the utmost comfort, the fireman has less firing to do and starts it at a later hour in the morning.

This properly proportioned water content, the high percentage of direct heating surface, and the Pacific's exclusive system of forced circulation give an economy and a flexibility obtainable in no other boiler.

Write for literature on the several types of Pacific installations. There is one to fit your next job. Pacific Steel Boilers, Division of United States Radiator Corporation, Detroit, Michigan.

TRADE MARK REG. U.S. PAT. OFF. STEEL HEATING BOILERS PACIFIC WAUKEGAN ILLINOIS

PACIFIC

STEEL HEATING BOILERS

DIVISION OF UNITED STATES RADIATOR CORPORATION, DETROIT, MICH.

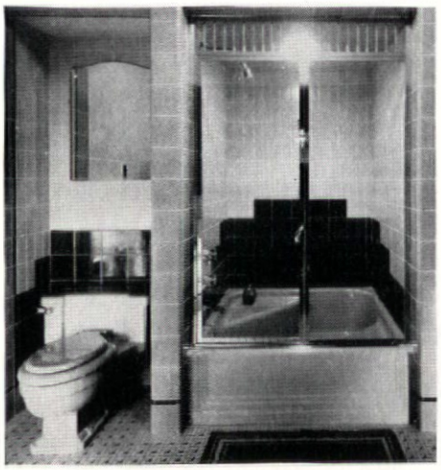
TILE

increases the value of a house

far out of proportion to its MODERATE cost!

EVERYBODY recognizes the value of tile . . . knows it as a luxurious floor and wall material. Its colorful beauty, permanence, and sanitary features are fully appreciated. An advertisement of a house for sale or rent is stronger when it mentions "tiled bath and tiled kitchen." The fact that most people think of tile as *expensive* is an advantage, but it is also a disadvantage in that some people may not even get comparative costs before deciding to use a substitute material. Actually, on a 20-year basis, a tiled room costs as little as 15c more a month, and since there are no re-decorating costs, tile costs *far* less in the long run.

Real tile is preferred by architects, because its wide range of colors and sizes makes it an interesting design medium as well as an economical wall and floor material.



Combination of deep red and two shades of gray tile makes this an outstanding bathroom.

Colorful tile is *one* material that is a "must" regardless of the size of a home or its geographic location. Nothing finer than tile can be used on walls and floors of a mansion; nothing as long-wearing can be bought for the modest-budget home.

It is truly *smart* to use tile.

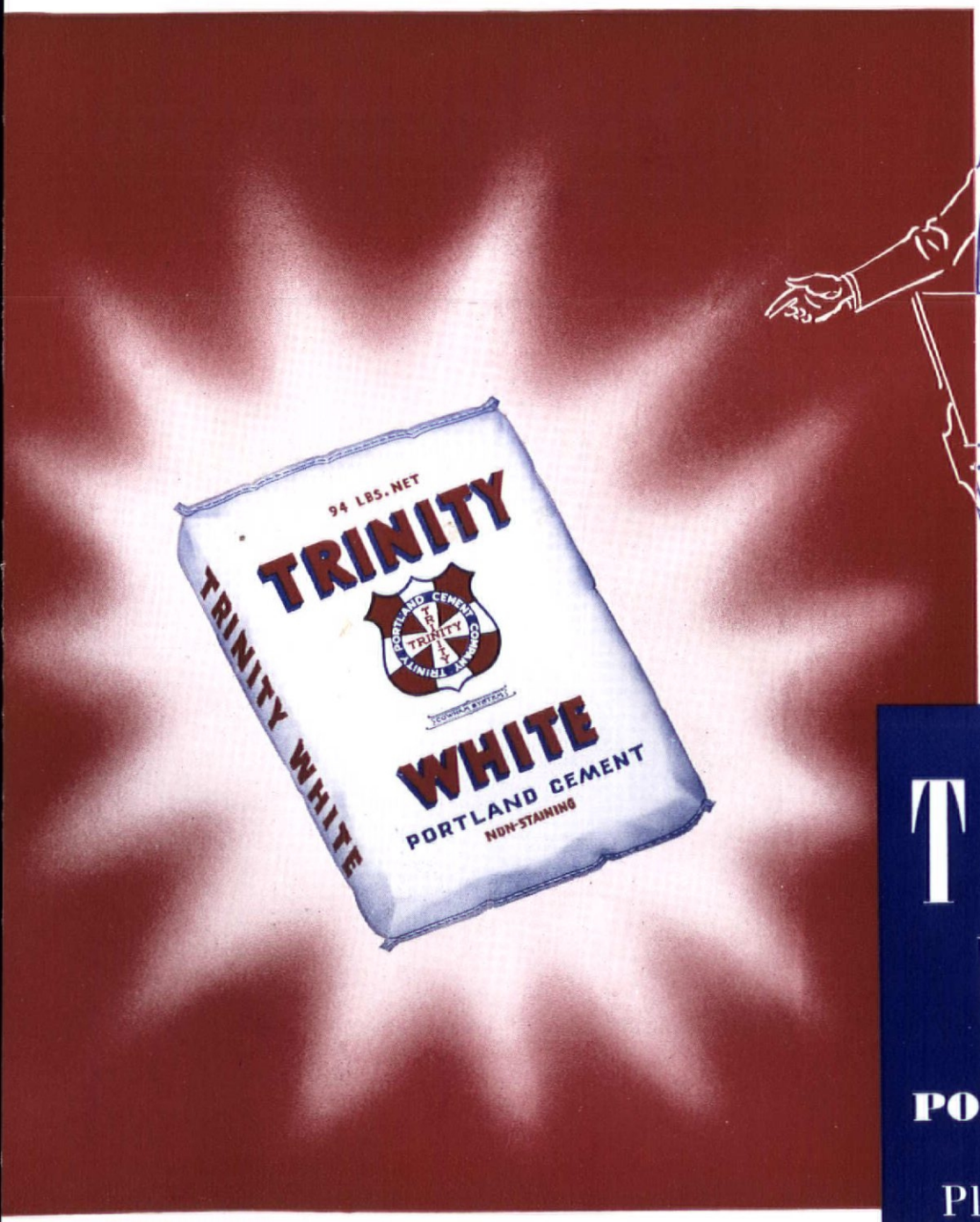
THE TILE MANUFACTURERS' ASSOCIATION, INC.

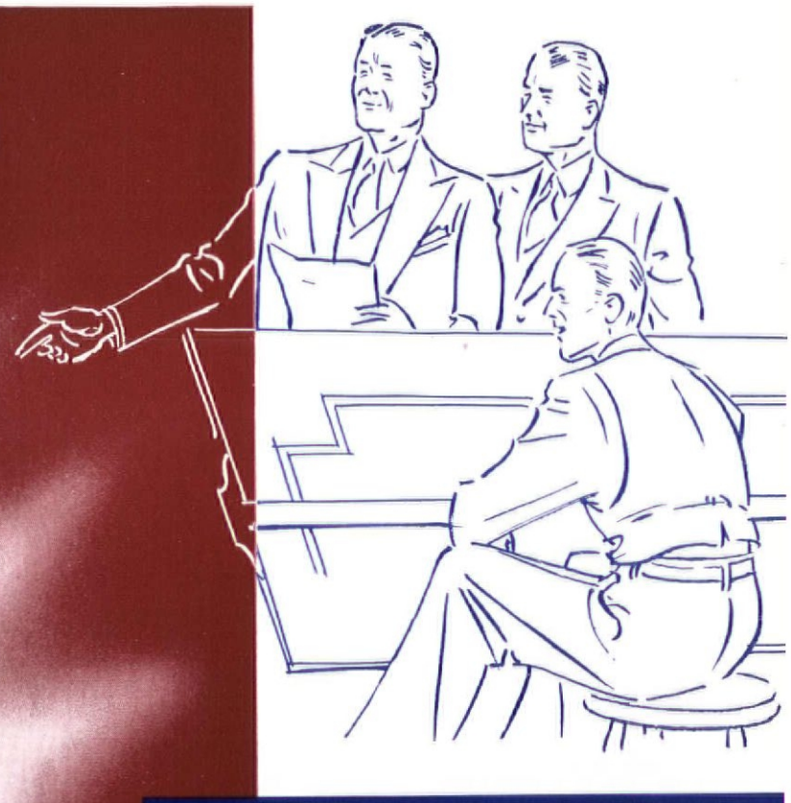
50 East 42d Street New York, N. Y.

Maybe you haven't heard, but–

The recent announcement of the *new* TRINITY WHITE Portland Cement was good *news* to you who wouldn't be interested in "just another white cement." For here is something *more* . . . a White Cement that has warmth and life—especially developed to meet *every modern requirement.* In fact, TRINITY WHITE is as up-to-date as today's news. Specify and use TRINITY WHITE on your next job. You'll be glad you did. TRINITY PORTLAND CEMENT COMPANY, Republic Bank Building, Dallas, Texas.

THE NEWS IS OUT!





TRINITY WHITE

PORTLAND CEMENT

Plain or Waterproofed

dri-bilt WITH PLYWOOD construction gives your client more house for his money!

This time-saving method is ideal for every plan, size and style of home!

1 Plyscord is the grade of Douglas Fir Plywood to use for sub-flooring, wall and roof sheathing. 5/16" Plyscord makes walls 5.9 times as rigid as horizontal board sheathing, goes up in 1/3 to 1/2 the time.

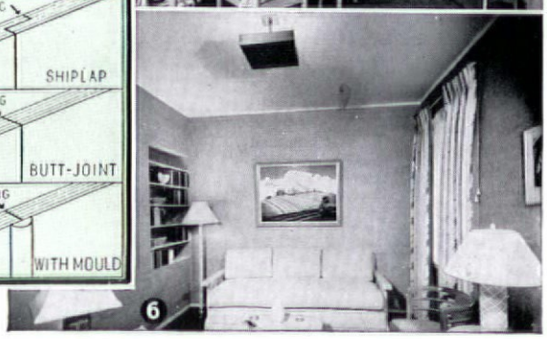
2 EXT-DFPA, the weather-proof type of Douglas Fir Plywood, builds smart, durable exteriors. It shuts out wind and dust, adds structural strength. See joint suggestions below.

3 Plypanel is the grade to use for built-ins. And don't forget, Douglas Fir Plywood can be bent to form pleasing curves, so important in modern design.

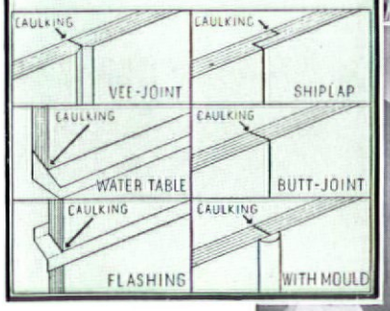
4 Douglas Fir Plywood is ideal concrete form material. Use Plyform where multiple re-uses are desired; specify Plyscord for 1-use forms, then salvage it for sub-flooring.

5 Douglas Fir Plywood builds puncture-proof interiors, yet is receptive to more finishes than any other material. Specify 1/4 or 3/8" Plywall or Plypanel.

6 This photograph shows grass cloth over Plywood. The walls of the dining room above have a light stain finish. For complete finishing data, send for free finishing folder.



A FEW JOINT SUGGESTIONS FOR EXTERIOR PLYWOOD



dri-bilt WITH PLYWOOD MEANS using the proper grades of Douglas Fir Plywood instead of traditional materials for everything from sheathing to interior and exterior finish. The advantages? *Many!* The big plywood panels reduce building time, minimize labor, add rigidity and warmth, build a more durable, more attractive house.

dri-bilt WITH PLYWOOD CONSTRUCTION is not just a pretty picture on a drafting board. It has been used and found practical on thousands of homes in every part of the country. Dri-Bilt with Plywood homes have proven that they can resist tornadoes and earthquakes, that the exterior grade of Douglas Fir Plywood sheds water like a duck, that plywood interiors can't be marred or punctured even by boisterous children.

dri-bilt WITH PLYWOOD HOMES can be readily financed through the F.H.A. They are approved by the Uniform Building Code. So investigate now how you can give each of your residential clients more house for his money . . . how you can both cut down your supervisory time and get your clients housed faster and better.

Consult Sweet's Catalog for more information or send for free literature. Douglas Fir Plywood Association, 1500 Tacoma Building, Tacoma, Wn.

DOUGLAS FIR PLYWOOD
Real Lumber
MADE LARGER, LIGHTER
SPLIT-PROOF
STRONGER

GENUINE DOUGLAS FIR PLYFORM Concrete Form Panel D.F.P.A. INSPECTED

GENUINE PLYWALL Douglas Fir Plywood WALLBOARD D.F.P.A. INSPECTED

SPECIFY DOUGLAS FIR PLYWOOD BY THESE "GRADE TRADE-MARKS"

PLYPANEL D.F.P.A. TRADE MARK REG. U. S. PAT. OFF.

EXT.-D.F.P.A. TRADE MARK REG. U. S. PAT. OFF.

GENUINE PLYSCORD SHEATHING D.F.P.A. INSPECTED

CORONADO

BATHROOM ACCESSORIES

A NEW LOW COST LUXURY LINE

Styled in Hollywood

HALL-MACK, famous for quality, now makes it possible for you to specify luxury accessories in the low cost home. Coronado fixtures are sturdy, massive, heavily chrome-plated—and so smartly designed that they provide a note of distinction at a cost of less than half that of other luxury accessories now on the market. The Coronado concealed locking device, patent applied for, holds the fixtures firmly in place, with no screws showing. Specify Coronado, by Hall-Mack, on your next low cost home—for the quality accents that mean so much to your clients.

ARISTOCROME

Turned at the Touch of a Finger
No. 338

The line of beauty for upper bracket homes. Rich simplicity characterizes the design of these heavily chrome-plated forged brass fixtures. The complete Aristocrome line of accessories includes the patented Concealed Lavatory Unit, shown at left, in which soap, tumbler and toothbrushes are hidden behind a revolving panel which is flush with the wall when not in use.

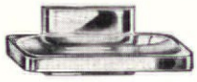
BE SURE TO SEE THE FULL HALL-MACK LINE IN SWEET'S CATALOG— 36 pages of quality bathroom accessories and cabinets, with complete descriptions and installation data. Write direct to us at LOS ANGELES (Dept. 201) for leaflet describing and pricing the Coronado line which is so new we have not yet had time to incorporate it in our Sweet's Catalog.

TOWEL BAR

	18"	24"	30"	36"
No. 694—¾" Square Chrome Bar	$1.70	$1.85	$2.00	$2.25
No. 695—¾" Round Chrome Bar / No. 696—¾" Round Crystal Bar	$1.60	$1.70	$1.80	$1.95

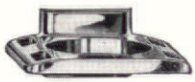
GLASS SHELF

	18"	24"	30"
No. 601—5" Crystal Shelf	$1.85	$2.00	$2.25



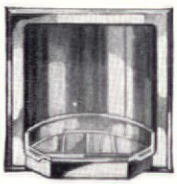
SOAP HOLDER
No. 620 — $ .85

HOOK
No. 681
$ .45



TUMBLER & TOOTH BRUSH HOLDER
No. 630 — $ .85

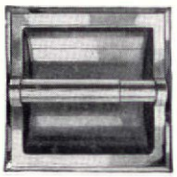
PAPER HOLDER
No. 670..... $1.60
No. 671..... $1.25
(Wood Roller)



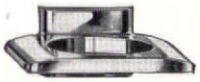
SOAP HOLDER
No. 625 — $2.30

TOOTH BRUSH HOLDER
No. 650 — $ .50

TUMBLER HOLDER
No. 645 — $2.05



PAPER HOLDER
No. 675 ..... $2.45
No. 676 (Wood Roller) $2.10



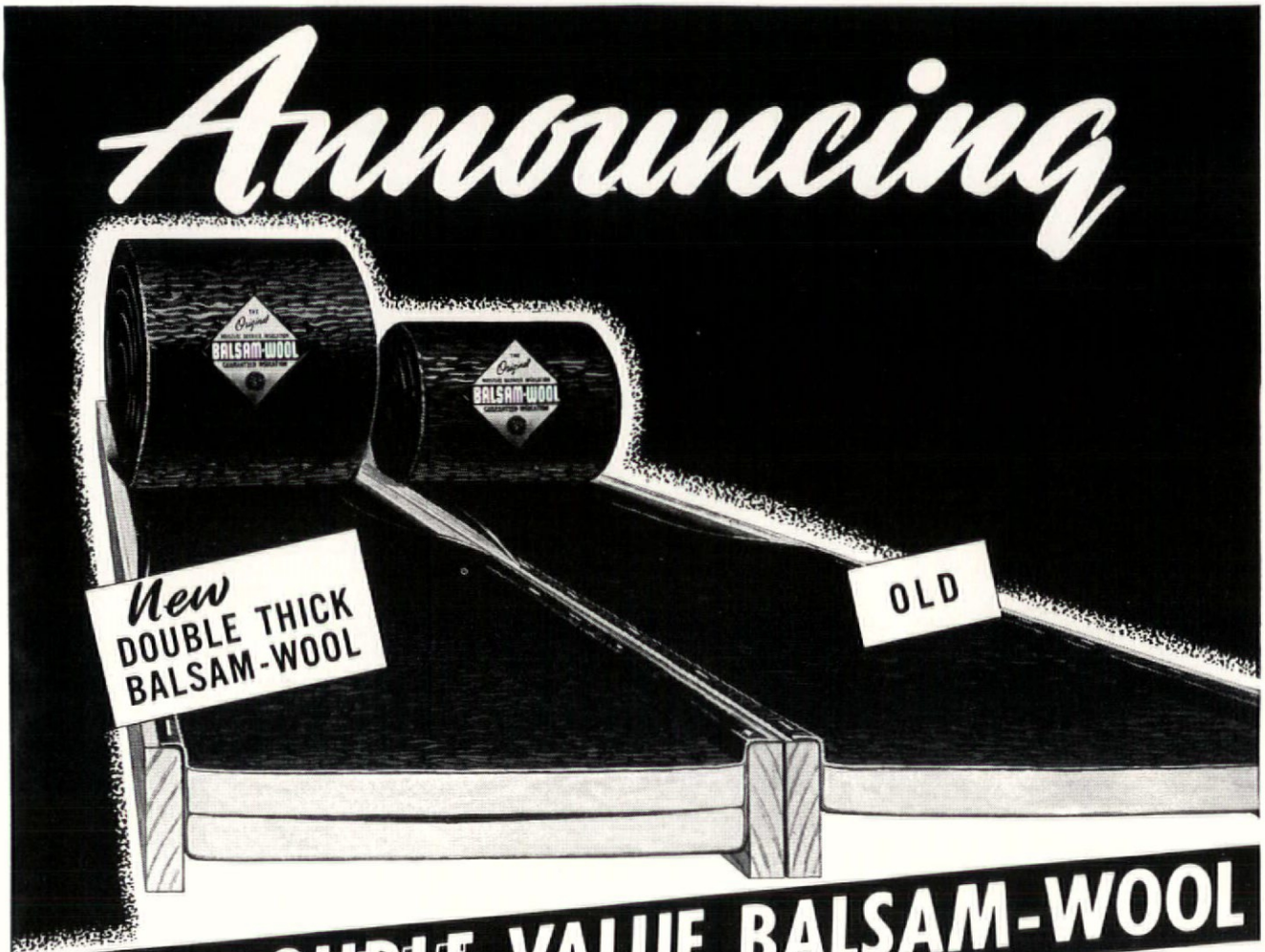
TUMBLER HOLDER
No. 640 — $ .85

SOAP & GRAB
No. 665 — $3.00

HALL-MACK
TRADEMARK REGISTERED

HALLENSCHEID & McDONALD

1344 W. Washington Blvd., Los Angeles, Calif.
1159 Howard Street, San Francisco, California
743 North Wells Street . . . Chicago, Illinois
15 Lombard Street, Philadelphia, Pennsylvania



NEW DOUBLE VALUE BALSAM-WOOL

NEW, *Increased Thickness*

NEW, *Increased Moisture Protection* • NEW, *Increased Efficiency*

AT NO INCREASE IN PRICE

BALSAM-WOOL—long recognized by architects as "tops" in insulation—now takes another big forward stride! The new BALSAM-WOOL provides even greater values in a product already far ahead of its field. Today, Balsam-Wool offers new, increased thickness—new, increased efficiency—new, increased moisture protection—all at no increase in price! Here is new and greater value in Balsam-Wool—already the leader in the field.

TWO NEW THICKNESSES

Balsam-Wool is now available in two new Double Value thicknesses—STANDARD (formerly ½") and DOUBLE THICK (formerly 1")—offering new benefits to architects and home owners. Complete information about the new Double Value Balsam-Wool is yours for the asking. Mail the coupon.

THESE DOUBLE ADVANTAGES HAVE MADE BALSAM-WOOL

FIRST CHOICE

IN 250,000 HOMES

DOUBLE SEALING — Balsam-Wool is completely protected by a tough, impervious, protective covering.

DOUBLE WIND BARRIERS—stop wind infiltration—prevent chilly drafts—provide greater warmth for floors.

DOUBLE MOISTURE LINERS—providing an efficient and lasting moisture barrier. A *third* moisture barrier added in DOUBLE THICK Balsam-Wool.

DOUBLE AIR SPACES—to increase insulation efficiency—to allow walls to breathe.

DOUBLE BONDING — Balsam-Wool is doubly bonded to inside of liners to prevent settling or packing down.

DOUBLE FASTENING — Balsam-Wool is doubly fastened in place to eliminate settling. Balsam-Wool is fire-resistant and termite treated.

BALSAM-WOOL BALSAM-WOOL • • • NU-WOOD
PRODUCTS OF WEYERHAEUSER

WOOD CONVERSION COMPANY
Dept. 147-4, First National Bank Bldg., St. Paul, Minnesota

Gentlemen:
Please send me complete information about the NEW DOUBLE THICK and STANDARD Balsam-Wool.

Name.....

Address.....

City..... *State*.....

Here's How Lyon and Brown Sold 77 Homes Instead of 50!

J. W. Lyon and Walter Brown

Leaders in Oklahoma City and outstanding in the country, these builders believe in selling "better living" rather than "shelter."

Prices Range From $4,000 to $8,500

Read what these builders say about the SELLING FEATURES of GENERAL ELECTRIC Home Equipment

Lyon & Brown
REALTORS

PHONE 3-0451
314 N. ROBINSON
OKLAHOMA CITY OKLA

March 1, 1941

Mr. H. W. Trekell
General Electric Supply Corp.,
Oklahoma City, Oklahoma

Dear Mr. Trekell:

On March 24, 1940, we opened new Douglas Place Addition and planned to build during the year a total of fifty G. E. equipped homes in the $4,000.00 to $8,500.00 price class. We were pleased to find that at the end of 1940, instead of fifty homes, we had built and sold seventy seven between April 1st and December 20th.

We attribute our phenomenal success in the sale of these homes to being able to offer in our houses the additional selling features that the G. E. equipment offers. We find in our selling that home buyers today want better living instead of just four walls and shelter. We are so thoroughly pleased with the acceptance of G. E. equipped homes that we expect to use G. E. equipment in every home we build in new Douglas Place Addition in the future. It might be of interest to you to know that we have sold these homes as fast as we could build them, many of them before they were completed.

We wish to take this opportunity to thank you and your organization for the splendid cooperation and service you have given us. With sincere thanks and appreciation, we beg to remain,

Very truly yours,

LYON & BROWN

By J. W. Lyon

JWL/lh

Lyon and Brown have built their success on firm ground — a combination of good construction and high-quality operating equipment. And note what they say about public acceptance — remarks typical of those made by other leading builders who use G-E heating plants, wiring systems, and kitchen appliances *because they help sell houses.*

Perhaps the G-E Home Bureau's House Merchandising Plan can be of help to you, too. It's a *plus service* that includes Architectural Engineering, Promotional and Advertising aids — all designed to increase your sales. Why not find out about it now? There's no obligation.

General Electric Home Bureau, Dept. AF-414
1285 Boston Ave., Bridgeport, Conn.

Please send information on your House Merchandising Plan to

I am an .....Architect .....Building Own Home .....Building For Resale

Name.....

Address.....

City.....

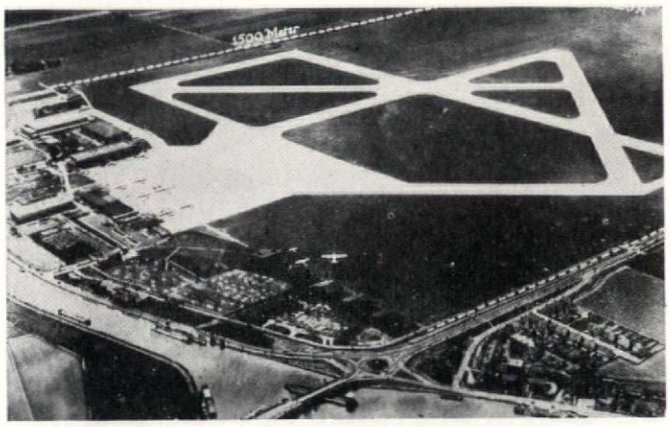
State.....County.....

GENERAL ELECTRIC

BOOKS

Airports . . . Epstein . . . Plantation House . . .

Carpentry estimating . . . Flower arrangements . . . Real estate subdividing . . . Painting and finishing wood.



SCHIPHOL AIRPORT, AMSTERDAM

AIRPORTS, by John Walter Wood. Coward-McCann, Inc., New York. 364 pp., illustrated with 444 photographs and 64 diagrams. 9 x 11¼. $12.50.

The author is an architect who has been interested in aviation and airports since 1915, and the material in the book was in the process of collection for the past eight years or more. To establish a sound basis for airport design a tremendous amount of research was done, involving the visiting of virtually all the important airports in the U. S. and Europe. By far the largest part is devoted to illustrated case histories of 48 major airports, and the data presented for comparison are of the utmost value, particularly at the present time. All plans have been redrawn, and the standard technique of indication and use of symbols simplifies their use considerably. Mr. Wood has also developed a traffic-control airport-expansion plan which is presented in detail. There are 22 appendices in which aviation statistics, general information, and specific data on requirements for various types of fields are given.

CONSUMMATUM EST

LET THERE BE SCULPTURE, by Jacob Epstein. G. P. Putnam's Sons, New York. 393 pp., illustrated. 6½ x 9½. $5.00.

Jacob Epstein was born in America, has passed most of his working life in London, and is best known to the public at large for monumental sculptures which have been interminably played up by the sensation-seeking press of the U. S. and England. Few will not agree that his portraits are among the best ever produced, but every time he has done larger work, whether as independent pieces or as adjuncts to architecture, a storm of controversy has broken out, with outraged feelings cropping up on all sides. His religious pieces, such as the "Consummatum Est" shown here, have especially infuriated the righteous, and a large part of his book is devoted to documenting various aspects of these controversies, and to describing what he was driving at in producing this work. It is an absorbing autobiography, which, for all the bad writing and rather fulsome expressions of self-esteem, nevertheless presents a convincing picture of an artist who has fought long and hard for the things he believes in. The most important work is well illustrated in photographs.

HAMPTON HOUSE

HOME BY THE RIVER, by Archibald Rutledge. The Bobbs-Merrill Company. 167 pp., illustrated. 7½ x 10. $3.00.

A slight but pleasant book, ostensibly about the restoration of one of the great plantation houses, but actually about a phase of American life that has been almost forgotten. The author is owner of a 2000-acre plantation on the Santee River, about forty miles from Charleston; the plantation has been in his family since 1686 and the magnificent house on the property was built in 1730. After an absence of almost fifty years Mr. Rutledge returned home and, with the help of the plantation Negroes, has gradually restored the house and grounds so that it again stands as an architectural landmark and is becoming something of a mecca for tourists. The story includes some descriptions of the work of restoration, and much more about the history of the surrounding country, the vegetation and wild life, and the local Negroes. Bound together in a section at the end are twenty-eight well reproduced photographs showing views of Hampton, some interiors and the landscape.

(Continued on page 130)

JUST WHAT THE DOCTORS ORDERED!

Goodyear Wingfoot Rubber Flooring helps achieve a quiet, dignified atmosphere in Long Island College Hospital, Brooklyn, N. Y. Contractors: Smith & Jessen, Inc.

A HOSPITAL floor must first of all be quiet underfoot and easy to keep immaculately clean.

These two qualities are found in Goodyear Wingfoot Rubber Flooring to a marked degree—that's why it was ordered for the wards, corridors and dining room of the Long Island College Hospital.

The resilient surface of this flooring deadens the sound of hurrying feet. It is so smooth and glossy that dirt does not penetrate it, and it is impervious to most acid and other stains.

Once installed, it stays in place without stretching or buckling. And the wide variety of colors in which it is available—together with the fact that it can be installed in either sheet or tile form—makes Wingfoot Rubber Flooring highly adaptable for homes and all public buildings.

For complete specifications, see Sweet's Catalog or write to Goodyear, Akron, Ohio—or Los Angeles, California.

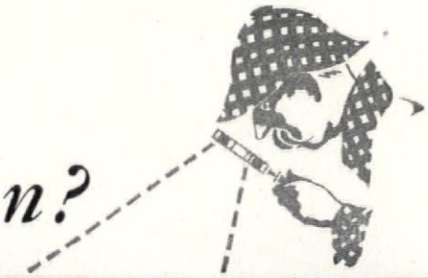
Wingfoot—T.M. The Goodyear Tire & Rubber Company

THE GREATEST NAME IN RUBBER

GOODYEAR

WINGFOOT RUBBER FLOORING

Can you detect the Built-In Fire Protection?



This Directors' Room shows how early planning permits blending of Grinnell Systems into design.

Incorporated in the original plans, a Grinnell System provides efficient "concealed" protection!

Sooner or later, automatic sprinkler fire protection is *bound* to come up for consideration in any truly modern commercial, industrial or institutional building. Why not be forehanded like the designer of the office shown above, and obtain harmonious blending of this essential safety feature into your designs?

Before the plans are off the draughting board, get in touch with Grinnell. There's a Grinnell System to meet every building need . . . and a staff of Grinnell engineers near you to help make fire protection a part of the building's functional design, instead of a visible piping job to be added later.

Over sixty years of intensive fire protection engineering experience enables Grinnell engineers to work with complete understanding – of both your plans and your clients' needs. You'll appreciate the ingenuity they contribute in developing mechanically-effective "concealed" sprinkler layouts.

Phone for an advisory interview which carries no obligation. Grinnell Company, Inc., Executive Offices, Providence, R. I. Branch offices in principal cities.

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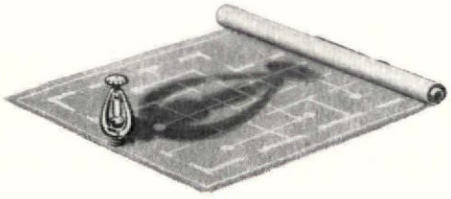
Automatic Sprinkler Fire Protection

A BLENDED PART OF YOUR BUILDING'S DESIGN



WHY DOORS AND WINDOWS OF *Ponderosa Pine*

ARE SUPERIOR...

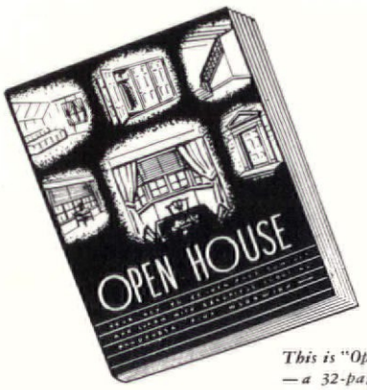
★ Now the public is being told where and how to use more doors and windows! People are being *shown* why Ponderosa Pine doors and windows are *better.*

You know where and how to use doors and windows. But now we are telling people who build and remodel *why* Ponderosa Pine has more to offer in superiority, service and satisfaction.

Here's why! First, "Ponderosa" is *pine!* That means a close and uniform grain that won't "raise." Edges don't splinter. "Ponderosa" is soft-textured, light in color. It has unexcelled smoothness and excellent appearance when worked by machine or by hand. Any architectural woodwork design can be beautifully executed in "Ponderosa." That's why doors and windows of it are popular *stock* items in so many retail lumber yards. Its ability to take paint or enamel, *to hold it better and longer,* is well known. Those are the main reasons Ponderosa Pine has been preferred for doors and windows for over 40 years. They are your best assurance for lasting satisfaction!

"Ponderosa" doors and windows give home builders, home buyers and home remodelers *ideas* for lighter, airier homes in a new book called, "Open House." See BETTER HOMES & GARDENS, AMERICAN HOME, HOUSE & GARDEN, and HOUSE BEAUTIFUL for May. In them begins *Ponderosa Pine's* national advertising campaign offering "Open House," the new idea book, *free.* It tells the story of Ponderosa Pine Woodwork excellence—gives your recommendations strong backing.

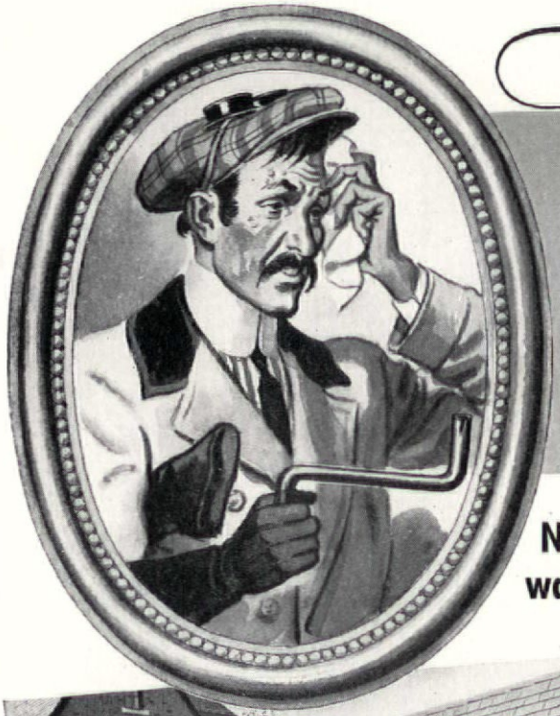
Write for your copy of "Open House" and full details about how this program can help you in your business.



This is "Open House" —a 32-page book of exciting ideas. Write for a copy.

PONDEROSA PINE WOODWORK

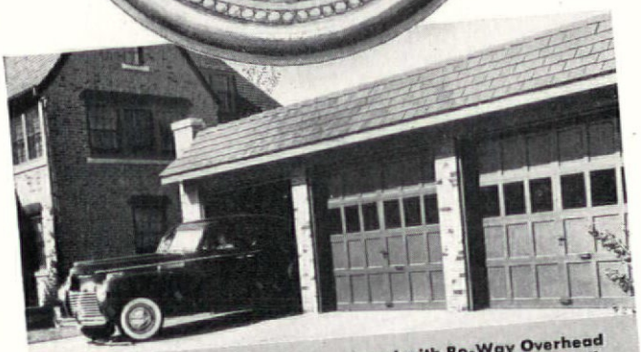
111 WEST WASHINGTON STREET • CHICAGO, ILLINOIS



Now-a-days who wants to "CRANK A CAR?"

NO ONE!—and what's more, no one now-a-days wants to operate a Garage Door that works hard

—sticks, binds, or is noisy. Neither do they want a door where they have to "get out and get under." Today—you want a car that you can "step in, step on and *go*." That's the kind of operation you want in garage doors, too.



Attractive three-car garage equipped with Ro-Way Overhead Type Garage Doors. Architects, Aldrich & Aldrich, Galesburg, Ill. Contractor, John Dahlberg, Galesburg, Ill.

(At left)—Ro-Way Garage Doors especially designed for use in Modernistic Service Station.

(At right)—Bus Station, Terre Haute, Ind., using 12 Ro-Way Doors. Miller & Yeager, Terre Haute, Ind., Architects.

Rō-Way OVERHEAD TYPE DOORS

—have kept pace with modern motor car developments. These quiet, trouble-free doors are really designed and built to enable a car owner to completely forget the mechanical parts just as he is able to do in operating his fine car. When he takes the car out or returns it to the garage, his Ro-Way Doors may be depended upon, day in and day out, to afford maximum protection with a minimum of attention. New refinements (exclusively Ro-Way) make even the rarely needed adjustment of a spring a matter of quick convenience.

Let Your Specifications Bring Your Clients "Five Extra Values at No Extra Cost"

When you write your specifications for any Residential, Industrial or Commercial job, add the word "Ro-Way" to "Doors of Overhead Type." By simply doing this you assure your clients of these five extra values: "Crow's Foot" Outer Bearing Support . . . "Ro-To Live" Spring . . . "Zip-Lock" Adjustment . . . "Tailor Made" Springs . . . and Parkerized and Painted Hardware.

Authorized Ro-Way Overhead Type Door Representatives in all principal cities are at the service of any architect wishing further information about these improved Overhead Type Doors for Residence, Commercial or Industrial Installations. Write for 72-page "Time-saving Specification Book."

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There's a Ro-Way for every Door way!

ARCHITECT'S QUIZ

1 HOW CAN CONDENSATION IN BUILDINGS BE CONTROLLED?

2 WHAT ARE THE BEST POSSIBLE WAYS TO PREVENT CONDENSATION IN BUILDINGS?

3 WHAT TYPE OF INSULATION MATERIALS WOULD YOU USE TO PROTECT AGAINST DAMPNESS IN WALLS?

4 WHAT SCIENTIFIC CONSTRUCTION SOLVES THE MAJOR CONDENSATION PROBLEM IN BUILDING TODAY?

HERE ARE THE ANSWERS:

1
"Condensation is not a problem of insulation but of construction, and it can be controlled by sealing the warm side of a wall, ceiling, or floor, and allowing the cold side to 'breathe'. Condensation cannot occur when water vapor is removed from a wall more rapidly than it can condense."
—Building Supply News
April, 1938

2
"Prevent as much moisture as possible from getting inside the wall by providing a 'vapor barrier' at the right place — at the inside of the wall, the warm side.

"Keep the surfaces with which the inside air comes in contact from getting too cold. Insulate thoroughly."
—House Beautiful
Nov., 1940

3
"To reduce the likelihood of dampness it is only necessary to use materials on warm side of a wall . . . that are good barriers to water vapor.

"To remove what little moisture might get through this first barrier or vapor seal ...make sure that materials on the exterior side...do not form impassable (vapor) barriers."
—House & Garden
March, 1938

4
Insulite's Approved Wall of Protection — because Sealed Graylite Lok-Joint Lath, with an asphalt vapor barrier on the warm side, effectively retards vapor travel; and Bildrite Insulating Sheathing outside permits whatever vapor may escape the barrier to pass harmlessly into the outside air.

A transcription of these and other experts' opinions on the condensation problem will be sent you on request. Address Insulite, Department AF41, Minneapolis, Minnesota

INSULITE

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THE *ORIGINAL* WOOD FIBRE *STRUCTURAL* INSULATING BOARD

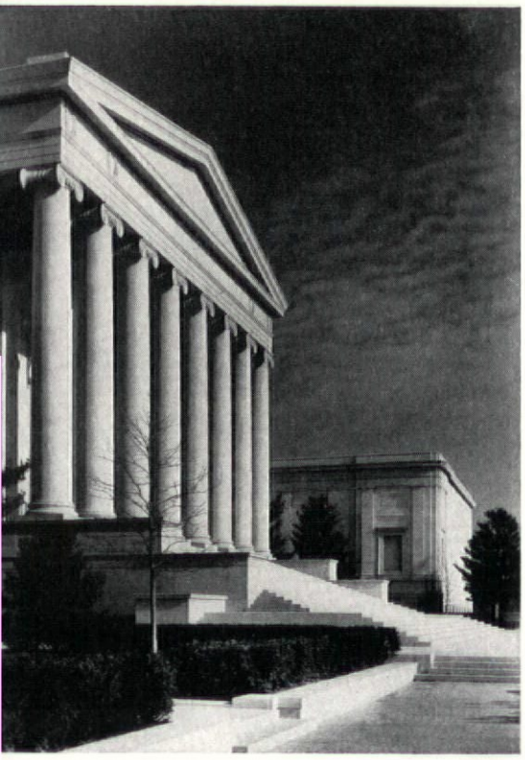
Pratt & Lambert Paint and Varnish

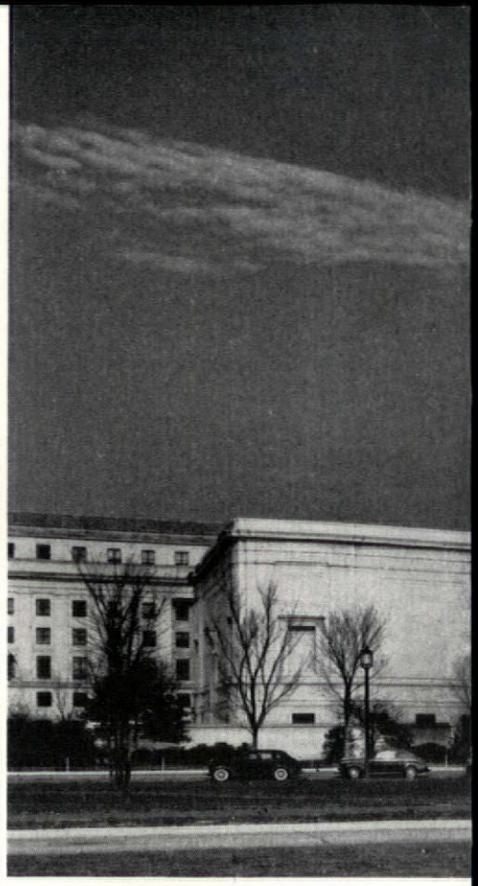
....USED IN THE DECORATION OF THE NEW

NATIONAL GALLERY OF ART

WASHINGTON, D. C.

Architect: the late John Russell Pope; Associates, Otto R. Eggers and Daniel Paul Higgins; Architect's Supervisor: James M. Allen, N. Y. City. Landscape Architect: Alfred Geiffert, Jr., N. Y. City. Consultants, A. W. Mellon Educational and Charitable Trust: James L. Stuart, A. R. Reed. General Contractor: Vermilya-Brown Co., Inc., N. Y. City. Painting Contractor: John F. Foster, Inc., N. Y. City. Cabinet Contractors: The Hayden Co., Rochester, N. Y. Grand Rapids Store Equipment Co., Grand Rapids, Mich.





(At right) GENERAL VIEW FROM THE MALL

DEDICATED March 17, the new National Gallery of Art in Washington, representing an outlay of $15,000,000, takes its rank as one of the world's finest museums. Classic in design and proportion, this imposing edifice, conceived and perpetuated by the late Andrew W. Mellon, will house this country's finest art collections. It is expected that the Gallery eventually will be one of the great repositories of the art treasures of the world.

The interior decorative painting of this magnificent structure called for finishing materials of the highest character — each selected for a specific purpose — to protect as well as to unobtrusively enhance the surface designated. Several thousand gallons of Pratt & Lambert Paint and Varnish were used on this large-scale project. Included in the materials selected were Lyt-all, the Universal Wall Coating, and Vitralite, the Long-Life Enamel. Whatever the problem — public building, industrial plant, fine residence or modest dwelling, the Pratt & Lambert Architectural Service Department offers you full co-operation.

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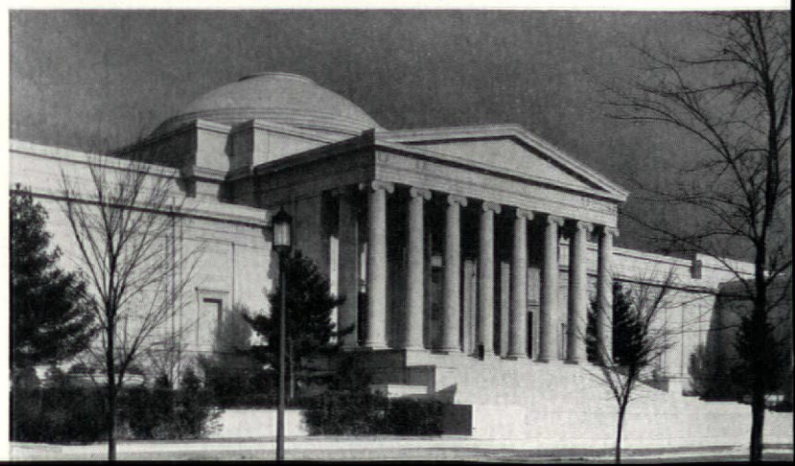
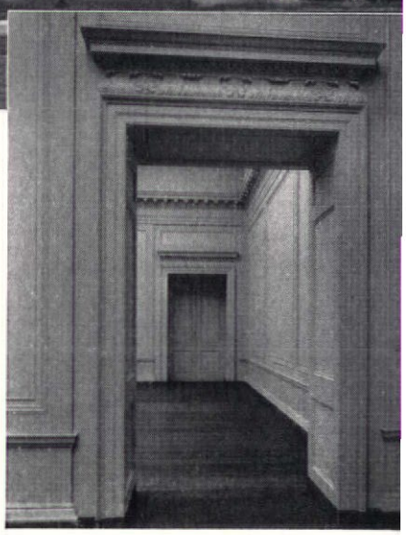
The main entrance (right) is up a rise of steps from the Mall, through two twelve-ton bronze doors into a vestibule, opening into the rotunda (left). Patterned after the Roman Pantheon, the rotunda is impressive with its twenty-four Italian dark green marble columns.



Photos by Samuel H. Gottscho

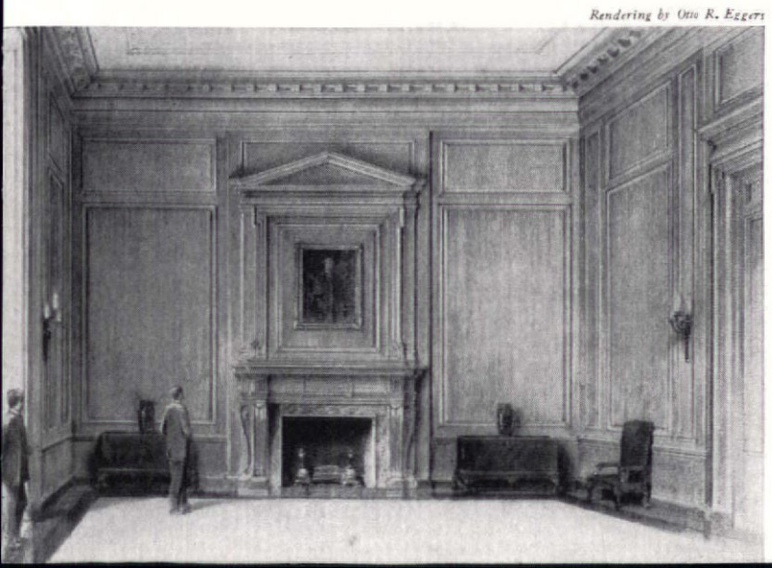


BUILT of specially-selected pink Tennessee marble, with funds provided by the late Andrew W. Mellon, the new National Gallery of Art in Washington is the first national building to be wholly devoted to the housing of a national art collection. Erected under the direction of the trustees of the A. W. Mellon Educational and Charitable Trust, the building will be operated as a bureau of the Smithsonian Institution. In addition to the Founder's contribution of art treasures, said to be valued at $50,000,000, there will be the extensive art collection of Samuel H. Kress, and eventually the Joseph E. Widener collection. It is anticipated that other gifts of paintings and fine sculpture will be presented to the Gallery. The galleries, where pictures will hang, open off the two main central galleries. Backgrounds for the canvases simulate the interiors of the period in which the paintings were executed.

Oak floors, broad and pegged, offer a pleasing foil to the polished surfaces of marble which line the rotunda and corridors. Air-conditioning and graduated lighting are only two of the modern engineering sciences incorporated in the operation of the Gallery.

This Founder's Room will be a constant reminder of the man who made this great Gallery possible — the late Andrew W. Mellon, former Secretary of the Treasury, an art collector of the first rank.

Rendering by Otto R. Eggers



The halls and galleries comprising the two wings, on either side of the rotunda, are so architecturally balanced, and the lighting so diffused, that the smaller exhibition rooms have an intimate charm.

LETTERS

DEFENSE HOUSING (cont'd)

Last month this department published correspondence between Defense Housing Coordinator Palmer and FWA Administrator Carmody and THE FORUM'S *Editor, regarding the employment on defense housing projects of private architects and builders experienced in the home field. Continuing this discussion below are some of the comments prompted by these letters. Private architects and builders will find at last some trace of suggestion that the Government's policy is changing in Mr. Carmody's latest letter (not previously published) under date of March 7, 1941. However, need for continuing representations by private architects and builders has not passed, and* THE FORUM *again invites comments from anyone who has any constructive contributions to make on the part of private enterprise in furthering the still lagging defense housing program.*

Mr. Carmody's Letter

Forum:

. . . Thank you very much indeed for the considerable list of names you sent me this morning. I recognized immediately some who have done work for one or another of our agencies, and some who have been asked within the past few days to accept assignments for architectural and site planning work.

You may be sure I appreciate this list, and I shall have it explored by those who are responsible for choosing such services.

JOHN M. CARMODY, *Administrator*
Federal Works Agency
Washington, D. C.

From Architects and Builders

Forum:

....You have covered the subject splendidly....As an architect now identified with the designing and building of two low rent USHA housing developments here, providing for 828 families, for the Elizabeth Housing Authority, and as Supervising Architect for the 100-family Grasselli Chemical Co. Housing development at Linden, N. J. during the last World War, I feel that I am, because of experience, qualified to also contend that the quickest and most satisfactory method of development would be the employment of experienced private practitioners. Certainly if the matter of National Defense is as urgent as has been claimed, then this is no time for experimentation in any field, furthermore, red tape must be reduced to a minimum.

C. GODFREY POGGI
Elizabeth, N. J.

Forum:

....I am in full accord with your comments regarding defense housing. In regard to all housing emanating from Washington I have but one comment to make: it seems to me that the work on housing done in Washington has to a large extent been admirable. All known types of research have been done in all the ramifications of housing, except one, and that one of the most important. *No research has been done to find architects capable of carrying out such plans.* The best architects are seldom those who make constant trips to Washington looking for work, the promoter, salesman type; and the best ones are not always the big name architects. I suggest some research here....

GEORGE FRED KECK
Chicago, Ill.

Forum:

You are doing the architectural profession a tremendous service. If any indication of the profession's appreciation would help we personally are more than delighted to signify our whole-hearted support.....

SAMUEL HOMSEY
Wilmington, Del.

Forum:

I have read the correspondence with reference to defense housing and find it quite interesting, but very discouraging, especially when it is realized how the 'Powers that be' in Washington are always trying to befog the issue with extraneous matters (as indicated by the correspondence).

The paragraph in your letter referring to the condition of most of the architects during the past decade is very pertinent especially at this time, but those in authority do not seem to take this much to heart.

With the architects being relegated to the background once again and ignored by Official Washington, is it not time we architects threw off our false dignity, got up on our hind legs and made some noise?....

B. H. WHINSTON
New York, N. Y.

Forum:

Congratulations to THE FORUM for bringing the defense housing up for discussion. It is an emergency and should be treated as such. The work, in my opinion, should be entrusted to those best able to do it, public or private.

Certainly the government has not demonstrated either speed or economy in low cost housing, so the answer would seem that the work should be entrusted to those accustomed to building small, cheap houses, as they will undoubtedly get down to fundamentals more quickly than the P. B. A., accustomed to an entirely different kind of work.

KENNETH W. DALZELL
East Orange, N. J.

Forum:

. . . The Newark Chapter of the New Jersey Society of Architects at its meeting of March 7, passed a resolution empowering its President to appoint a committee to map out a program designed to "sell" Government Defense Authorities and other Public and Semi-Public agencies the advantages of employing Newark Architects for local work.

The question of the employment of local architects for local public and semi-public work was thoroughly discussed as it related to Newark. The consensus of opinion could be summed up as follows:

1. Newark enjoys a technical labor market second to none, being the same as New York.

2. Newark architects are well organized and are thoroughly competent.

3. Architects generally have a natural following of contractors, sub-contractors, material manufacturers and dealers. When employing a local architect this following is naturally favored by force of circumstances. These people are familiar with local labor and its regulations, building laws, markets and similar conditions. The favorable economic effects locally of the policy of local architects, builders, etc., will go a long way to dispel the unfavorable effects of defense housing and similar works on the local community.

4. The Newark Chapter of the New Jersey Society of Architects believes that these advantages far outweigh any possible technical or administrative advantages that outside or central control could have upon the class of work now contemplated.

CHARLES E. KRAHMER, *President*
Newark Chapter
New Jersey Society of Architects
Newark, N. J.

Forum:

. . . I agree with you and do not see that the reasons for using private architects and builders in defense housing could be stated more clearly and truthfully.

In my own city, Charlotte, N. C. where the Federal Government is spending approximately two million dollars on a Federal Airport and where, it has been said, some two or three hundred houses will be

(Continued on page 112)

Well-known manufacturer* receives this profitable *double-benefit!*

Specifications for bids on 2,000 individual fluorescent units had already been issued. Then engineers on this important new plant* discovered their lighting job could be handled more efficiently and economically with IVANHOE "50 FOOT CANDLERS". Very next day entire electrical work was done over—new estimates made up. These called for a minimum of 30 foot candles *maintained*—5 *foot candles more* than originally planned. They got this greater illumination and along with it *a net saving of $8.000!*

Find out what Ivanhoe Fluorescent "50 Foot Candler" can do for YOU—and your clients

Many similar case studies* in our files prove beyond a doubt that IVANHOE "50 FOOT CANDLER" can be *your* best-paying fluorescent lighting investment today. No equipment duplicates it because it is *not* a lighting fixture. It is a *lighting system*...the first RLM *Continuous Wireway* Fluorescent Lighting *System* providing new higher levels of illumination at economical cost. Write for new "50 FOOT CANDLER" Bulletin 1C which gives complete facts.

IVANHOE "50 FOOT CANDLER" offers...

Higher Illumination . . . 30 to 50% Lower Installation Costs . . . Easier, Faster Installation . . . Uniform Light Distribution...Clean-cut, Modern Appearance... Simplified Maintenance... Allowance for Future Lighting Needs.

THE IVANHOE MARK OF A COMPLETE LIGHTING SERVICE

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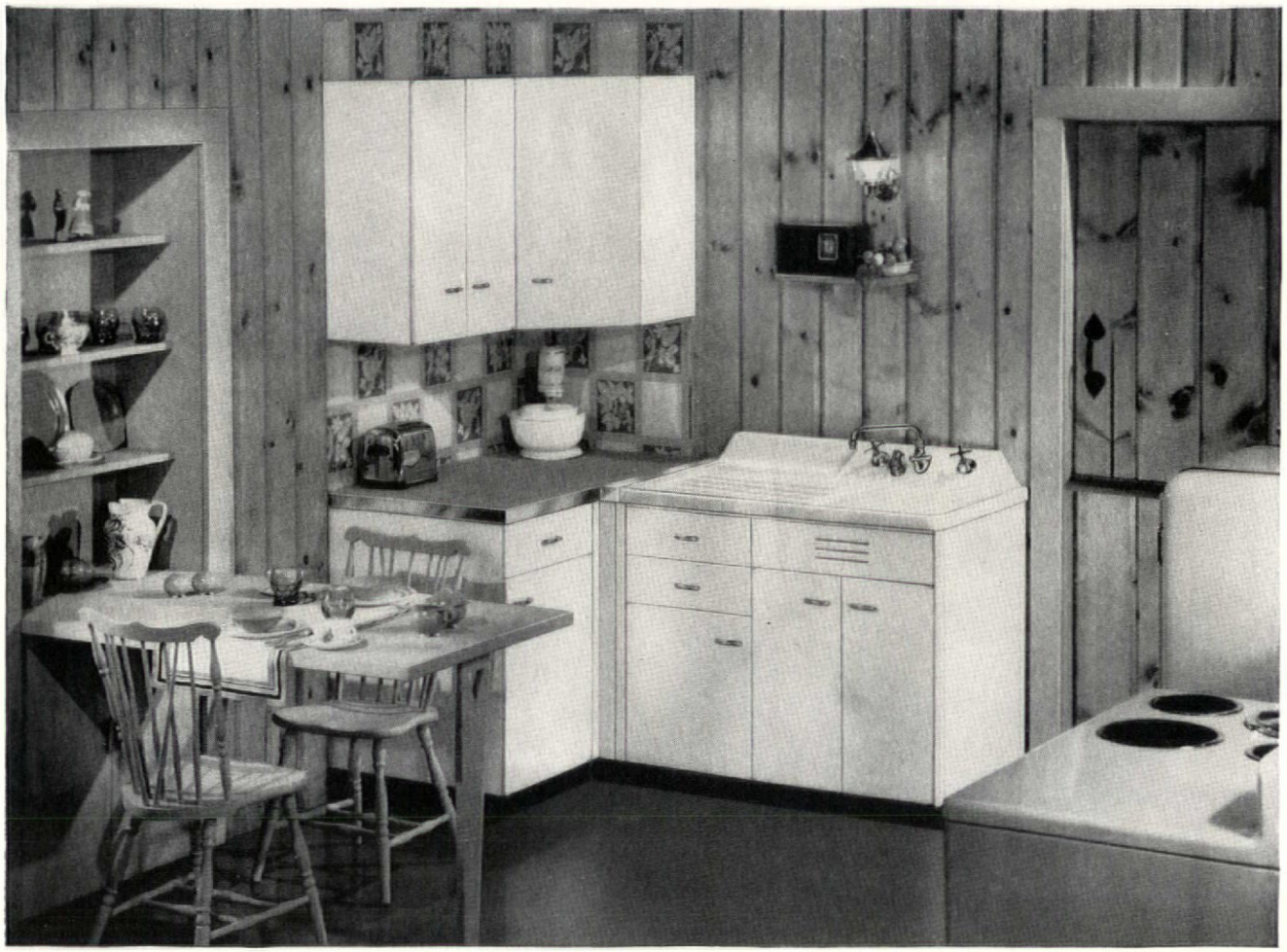
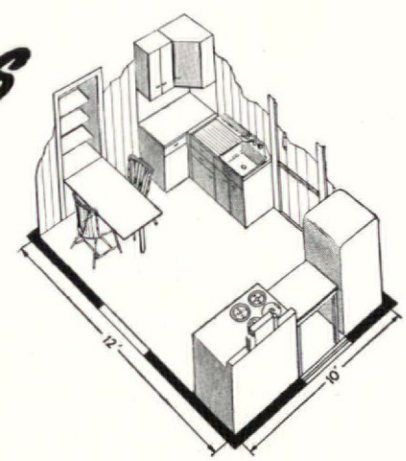
MERIDEN, CONN.
Pioneers in Good Lighting Since 1844



A HAPPY SOLUTION with CRANE KITCHEN UNITS



A convenient and logical arrangement is made possible in this 10 x 12 foot kitchen by the use of a Crane Kitchen Unit.

THE illustration shows only one of the attractive kitchen arrangements made possible in small space with Crane kitchen units.

These units—Crane sinks and cabinets arranged in individual groups for any size of space—provide an easy, practical solution for many design problems. With Crane equipment, storage space is adequate, but without waste . . . kitchen livability is increased through a more logical arrangement of sink and cabinets . . . and, of course, there is the outstanding advantage of the modern Crane sink, with its up-to-date convenience and durable, acid-resisting porcelain enameled cast-iron construction. Information about Crane Kitchens is yours for the asking—and will be sent without obligation.

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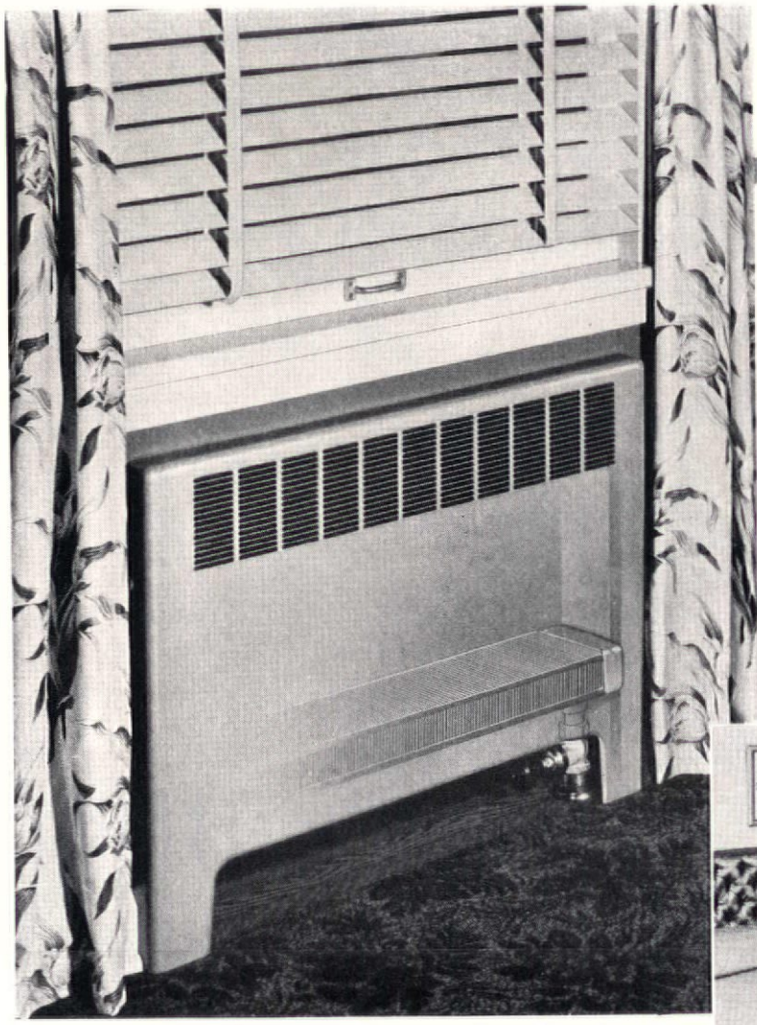

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HEATING
with modine convectors
THAT MAKES THE HOUSE A HOME

Top: *View of Modine Convector showing copper heating unit as concealed behind Panel Front Recessed Type enclosure.*

Right: *Attractive Modine enclosures blend harmoniously with decorations and furnishings of any room.*

Designed for living—there's no better way of describing the house or apartment that's heated with Modine Copper Convectors.

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And comfort! That's insured by the *proved* precision heating of the Modine copper unit. And with it the flexibility, close automatic control, safety and lower-per-year cost of a hot water or steam system.

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SEC. 26, CAT. 80

Look in your phone book for Modine representative's name—"Where to Buy It" section under Heating Apparatus

Write for Literature

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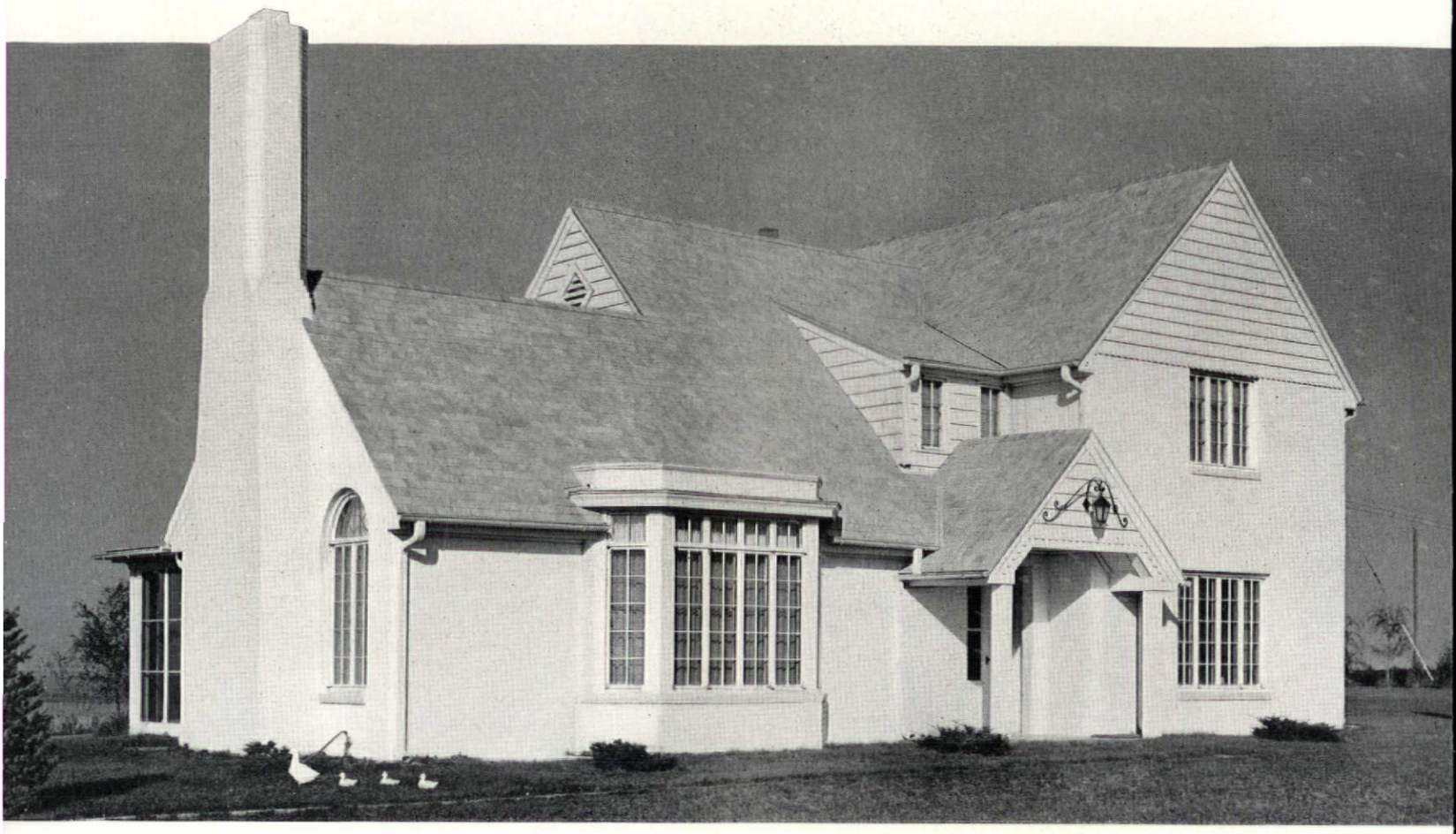
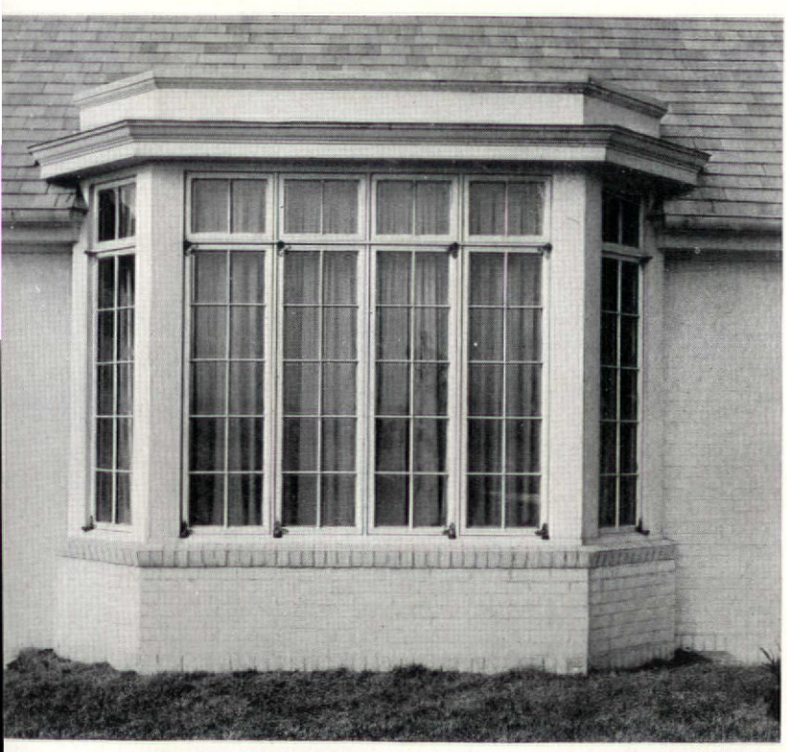
THE *Convector* **WITH THE**
MANUALLY REMOVABLE ENCLOSURE FRONT

NO BOLTS, NO SCREWS
NO TOOLS TO USE

GENEROUS FENESTRATION ACHIEVED BY USING MANY ANDERSEN CASEMENTS IN THIS FARMHOUSE TYPE HOME, OMAHA, NEBRASKA



BERT B. HENE, ARCHITECT



TRANSOM-TOP ANGLE BAY OF ANDERSEN CASEMENTS

This is one of a series of outstanding uses of Andersen Lifetime Windows in homes designed by architects.

This Nebraska home is a good example of modified American farmhouse architecture, illustrating the wide variety of attractive window treatments possible, using only stock-size factory-fitted window units. This home is enhanced both in beauty and in practical living qualities by the liberal use of Andersen Casement Window Units. Six standard stock-size Andersen Casements are effectively combined to form a striking transom-top angle bay, the focal point of interest in the home, while other liberal window spaces are filled with three- and four-unit Andersen Casements. A charming pair of Andersen Casements with segment top, graces the side of the structure.

Andersen Casement Window Units are carried in stock by many millwork dealers. Ask for a demonstration of these complete Lifetime Windows.

FOR FURTHER INFORMATION, SEE SWEET'S CATALOG SECTION 15, No. 24, OR WRITE ANDERSEN FOR TRACING DETAILS AND SPECIFICATIONS.

Andersen Corporation

BAYPORT · MINNESOTA

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Reason No. 1 — It was designed by a good architect — and built by a good contractor.

Reason No. 2 — It has always been painted with a pure white lead paint — Eagle White Lead.

New-looking homes are easy to rent, easy to sell. And to keep homes new-looking requires good paint.

Eagle White Lead mixed with linseed oil makes a paint that wears supremely well. Its elastic film of protection doesn't crack or scale.

This pure white lead paint has been preserving the beauty of American homes since 1843. Its performance is uniform, dependable. Time between paintings is lengthened — maintenance costs are lowered. Eagle White Lead is a sound specification for all properties.

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You can assure your clients of such comfort in a lavishly appointed residence, or a modest 5-room home. Fitzgibbons has been supplying residential COMFORT for fifty-five years—a record which carries positive assurance of satisfaction.

ANY HOME CAN BE EXACTLY FITTED WITH A FITZGIBBONS STEEL BOILER OR AIR CONDITIONER

Wide range of sizes. Types for use with oil burner, gas burner, coal stoker. When planning new homes, check on the outstanding advantages of these air conditioning furnaces and life-time steel boilers. Fitzgibbons steel boilers can be installed quickly and will give automatic domestic hot water all year 'round as well as abundant radiator heat at an impressive fuel saving.

FILL IN AND MAIL THE COUPON—AND GET THE FACTS.

AF

Fitzgibbons Boiler Company, Inc. **101 PARK AVENUE, NEW YORK, N. Y.**

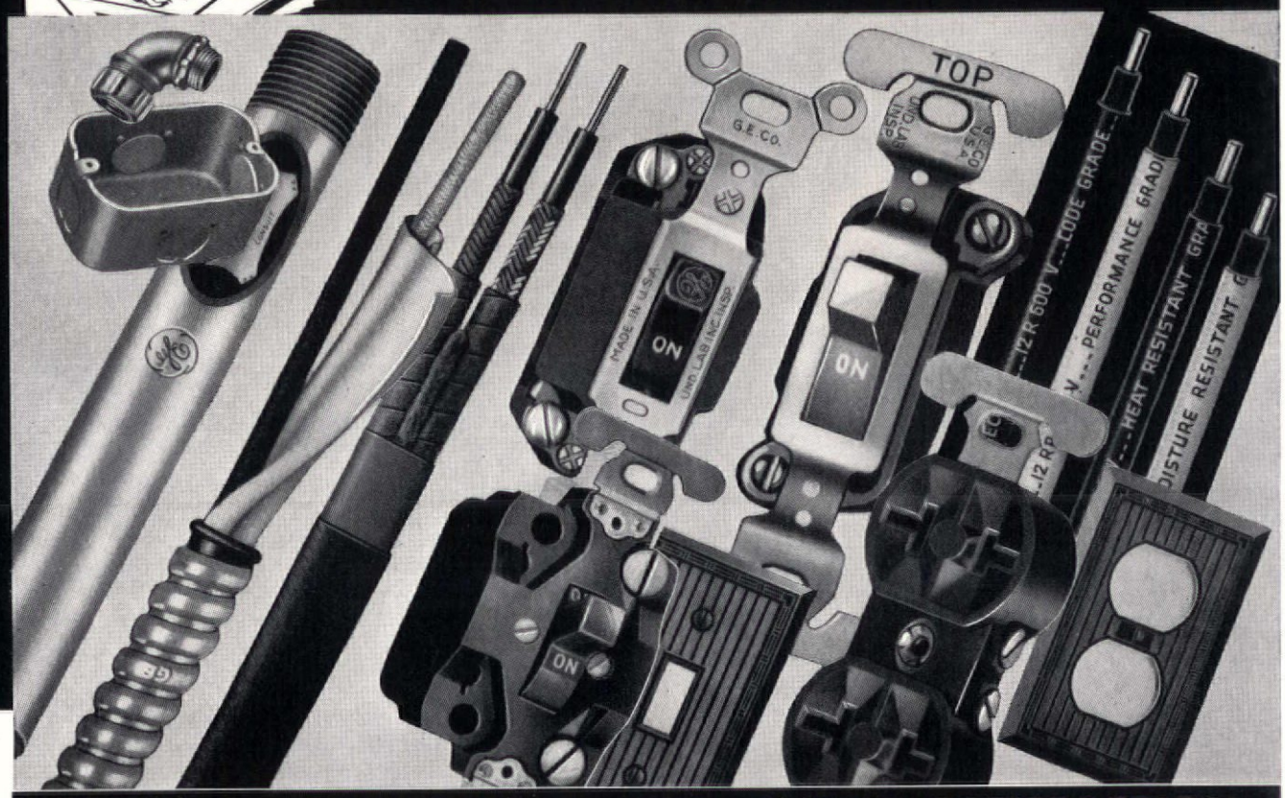
☐ Please send me Steel Boiler Data. ☐ Please send me Air Conditioner Data.

NAME.....

ADDRESS..... CITY..... STATE

WIRING IS IMPORTANT

IN THE BUILDINGS YOU DESIGN



SPECIFY G-E MATERIALS FOR CLIENT SATISFACTION

Abundant electrical power is needed today in all types of buildings—for lighting, for portable appliances, and for fixed equipment.

Specify wiring adequate to carry this power; and for client satisfaction specify G-E wiring materials. The G-E line is complete. It is made up of quality materials including conduit, wire and cable and wiring devices—all carefully designed and manufactured.

Moreover, to help you, General Electric has published two manuals: one on residence wiring, the other on industrial wiring. The manual on residence wiring, called the G-E Home Wiring Handbook, gives complete information on a modern wiring method which assures adequacy. The manual on industrial wiring called "Adequate Wiring for Industry" outlines modern factory wiring practices which can be adopted in all factories to increase efficiency. Both manuals are up-to-date and in accordance with the 1940 N.E.C.

GENERAL ELECTRIC

For further information about G-E wiring materials see Sweet's 1941 Catalog for Architects or send the coupon for one or both of the manuals.

General Electric Co.,
Section CDW-1264,
Appliance and Merchandise Dept.,
Bridgeport, Conn.

Sirs: Please send me without obligation

( ) G-E Home Wiring Handbook, Pub. No. 51-4014

( ) Adequate Wiring for Industry, Pub. No. 51-4011

Name.....

Address.....

City..... *State*.....

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DEFENSE PLANTS · FACTORIES · WAREHOUSES · STORES

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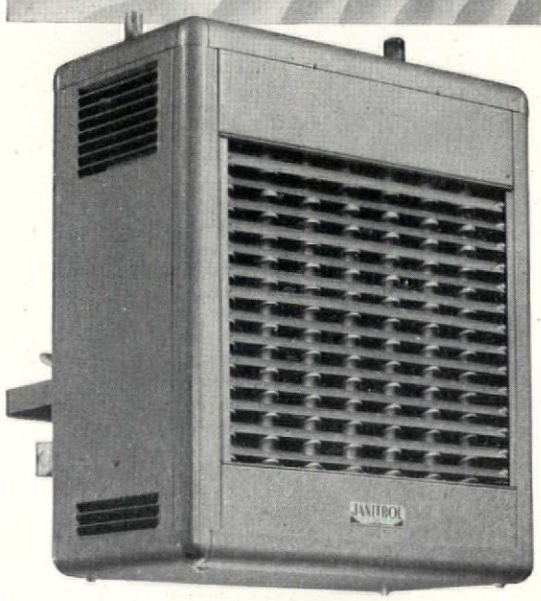


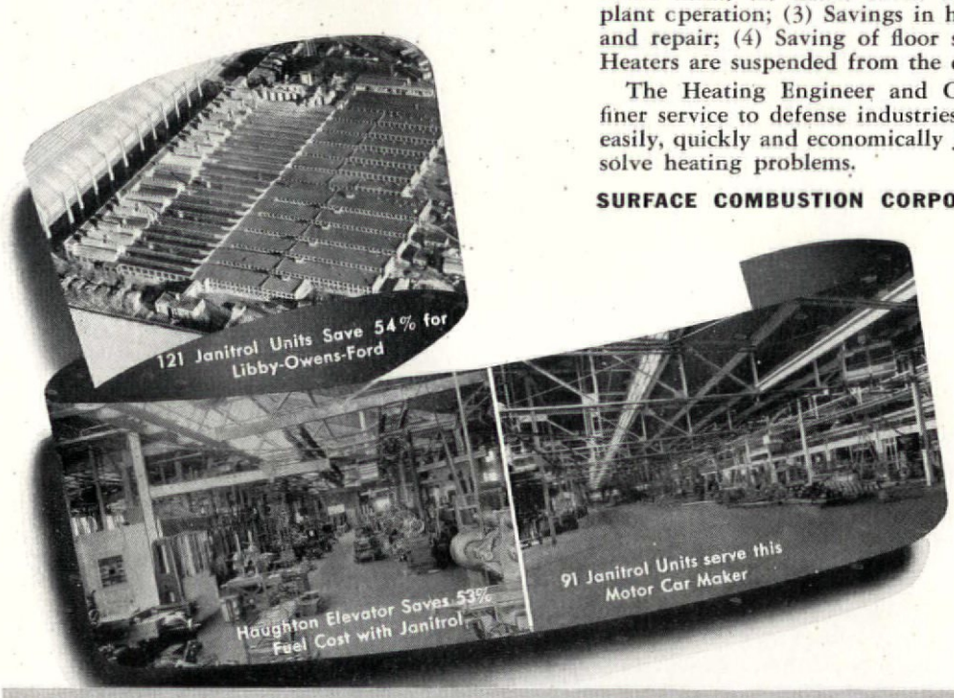
GAS-FIRED UNIT HEATERS

While it is true that Janitrol Gas-Fired Unit Heaters can be installed and in operation before the average central heating plant could pass the blueprint stage, this speed is only one of the many advantages of this modern heating method.

Great savings are recorded in large factories such as Libbey-Owens-Ford, Haughton Elevator Company and in large automobile factories. These savings are (1) Saving in heating plant investment and fuel storage and the room to house them; (2) Labor saved by elimination of heating plant operation; (3) Savings in heating plant maintenance and repair; (4) Saving of floor space (most Janitrol Unit Heaters are suspended from the ceiling).

The Heating Engineer and Contractor can render no finer service to defense industries than to show them how easily, quickly and economically Janitrol Unit Heaters will solve heating problems.

SURFACE COMBUSTION CORPORATION, TOLEDO, OHIO



35 YEARS OF SPACE HEATING EXPERIENCE IS AVAILABLE TO ENGINEERS, CONTRACTORS AND OWNERS BY MAIL, PHONE OR WIRE

WINTER AIR CONDITIONERS
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CONVERSION BURNERS
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35 YEARS

SURFACE COMBUSTION

Specify BRUCE STREAMLINE FLOORING—Gives Clients Many Advantages

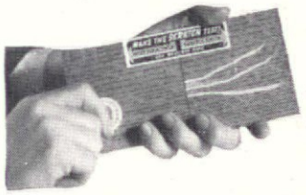
FACTORY-FINISHED! Bruce Streamline Flooring comes finished and waxed—ready for use the instant it's laid. So it saves time, labor. And, so important for remodeling jobs, there's no mess, smell or waiting for the finish to dry.

FLOORS OF LASTING BEAUTY! Everybody loves that smart "shadow pattern" effect of Streamline, with its extra wide strips and beveled edges. And the "sealed in," scratch-resisting surface is so easy to keep clean.

A LIFESAVER FOR BUDGETS! No wonder home owners are thrilled to get a really superior floor—with extra beauty and wear—at no greater cost than ordinary oak flooring finished in the home.

MAKE THIS SCRATCH TEST! Let clients see the proof of how Streamline's amazing new finish withstands wear that would chip and mar ordinary "surface" finishes. Send for free "scratch test" panel.

● Bruce Streamline Flooring is available in Oak, Maple and Beech. Three sizes $^{25}/_{32}''$ x $3^1/_4''$, $^1/_2''$ x $2^1/_2''$ and $^3/_8''$ x $2''$. Laid like ordinary strip flooring. Nationally advertised. Mail coupon for complete information and free "scratch test" panel *today.*



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Asbestos-Cement Sidings
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Permanently attractive, these 24-inch siding panels are rapidly applied. Termite and rot-proof, Flintkote asbestos siding is available with embossed wood designs or frankly functional patterns.

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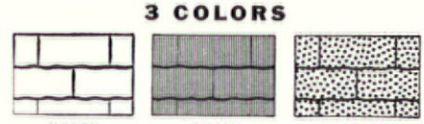
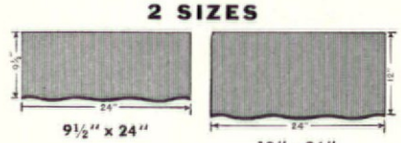


WHITE GRAY MOTTLED

2 SIZES



9½" x 24" 12" x 24"

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Products of the same high quality are sold by the Beckman-Dawson Roofing Company and Richardson Roofing, affiliates of The Flinkote Company.

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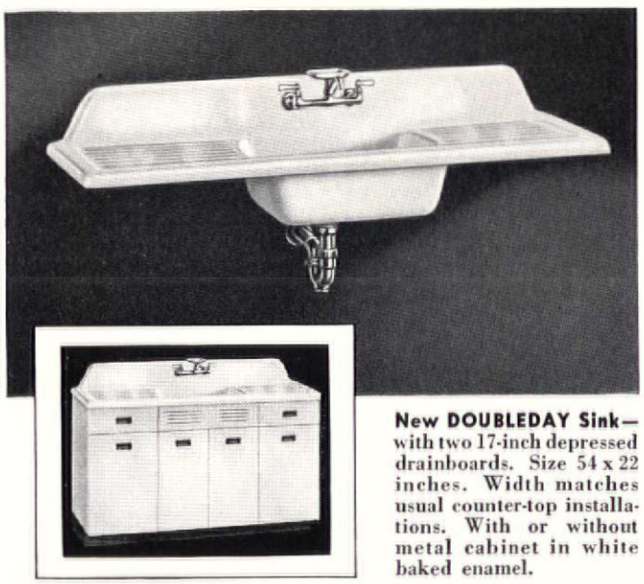
STAPLE LOW-COST SINKS
Styled for Modern Small Kitchens



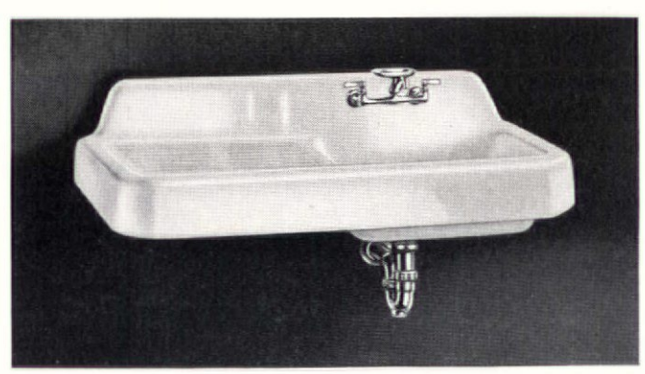
New DOUBLEDAY Sink—with two 17-inch depressed drainboards. Size 54 x 22 inches. Width matches usual counter-top installations. With or without metal cabinet in white baked enamel.

It's NEWS! . . . These are new and exclusive designs, made to meet the call for high quality at low cost. Consider these interesting features:

• Acid-resisting enamel *only*, for better service at lowered cost. . . . 8-inch-deep basins with Duo-strainers. . . . Low backs (6½ inches) and square corners for building into wood and steel cabinets. . . . Faucets with raised spouts.

It's NEWS! . . . See the new KOHLER CATALOG K-41 — a *valuable* book with useful facts on fixtures and fittings; bathroom and kitchen planning; heating equipment and electric plants. . . . Kohler Co. *Founded 1873.* Kohler, Wisconsin.

New HOLIDAY Sink—with depressed 21-inch drainboard. Size 42 x 20 inches. With or without metal cabinet in white baked enamel.



New TRIMM Sink—with 21¼-inch depressed drainboard. Beveled apron. Size 42 x 20 inches.

KOHLER OF KOHLER

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CLOSE MESH DESIGN

IS NOW STANDARD ON ALL AUER

DURABILT

FLOOR REGISTERS

AND

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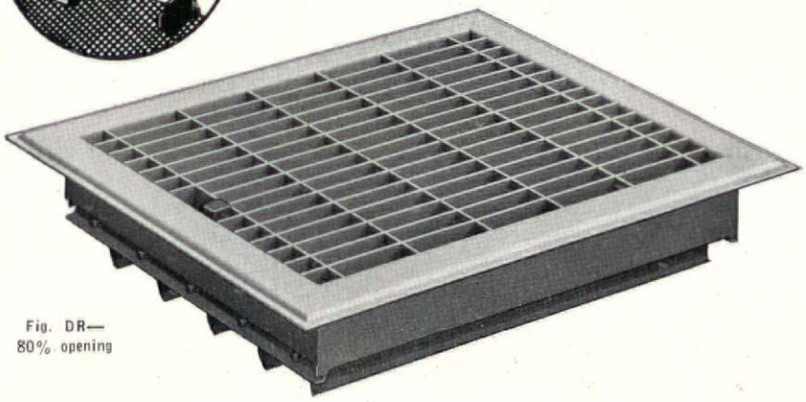

Fig. DR—
80% opening

New models in Auer DuraBilt Floor Registers and Intakes have been improved in appearance and in service with *smaller size* of openings. This narrower mesh (½" x 2") shuts out French heels and small objects — is more practical, and safer. This new design is now *standard* at no higher cost.

DuraBilt Registers and Intakes are assembled from flat steel bars, all locked and mortised at joints. Grille assembly is tenoned into welded frame. Rigid, rugged, durable. All members carefully aligned — all faces level. High percentage of open area. A new and better value — at the *old* price! Specify DuraBilt Registers for your warm air jobs.

A request from you brings complete Auer Register Book, showing all types and designs for air conditioning and for warm air. Special Grille Catalog "G" also available.

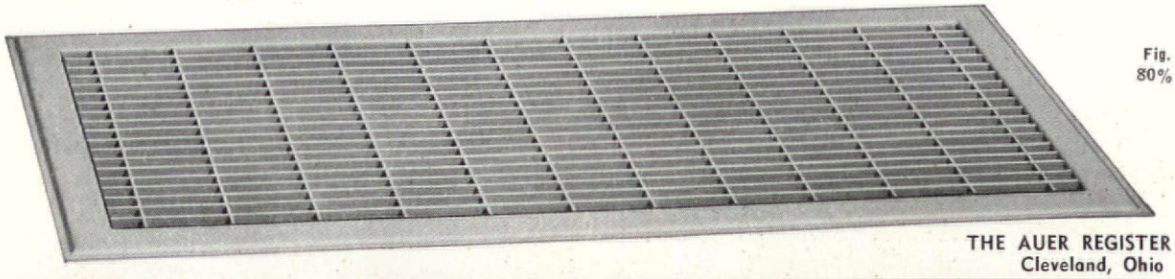

Fig. DSC—
80% opening

THE AUER REGISTER CO.
Cleveland, Ohio

AUER REGISTERS

& GRILLES · For Air Conditioning *and* Gravity

Any Type of Home Can Be Built in "Comfort Street"

KIMSUL—4,000 sq. ft. of it—insulates the second floor ceiling and roof of this home owned by D. F. McCarthy, Evansville, Ind. Architect Edward J. Thole used KIMSUL because it makes possible "a satisfactory installation and gives the owner the assurance of a permanent insulation for his residence."

• The desire for comfort is universal. That is why "Comfort Street" has a site for the modest bungalow as well as the stately mansion. "Comfort Street", you see, is any street where homes are insulated with KIMSUL*. Whenever cost is an important factor, it pays to remember these exclusive advantages. First, the KIMSUL price per square foot is low. In addition, KIMSUL is one of the easiest and quickest insulations to install . . . saves time and man-power. Delivered compressed, KIMSUL further reduces costs by decreasing storage, handling, and shipping charges.

KIMSUL meets your most exacting requirements of efficiency and safety. KIMSUL conductivity is only .27 B. t. u./hr./sq. ft./°F./inch (Peebles). KIMSUL is moisture-resistant, non-burning, and lasting. Once in place, KIMSUL remains at proper density and does not settle. Specify KIMSUL for all your homes in all price ranges. Mail coupon and discover how much more KIMSUL does for the money.

**Reg. U. S. and Can. Pat. Off.*

DON'T JUDGE INSULATION'S EFFICIENCY BY ITS THICKNESS

Heat Loss Stopped in Walls

Maximum heat loss stopped with insulation.

Heat loss stopped by Standard (Approx. 1 in. thick) KIMSUL.

KIMSUL is available in three thicknesses: *Commercial* (nominally ½ in. thick), *Standard* (nominally 1 in.), and *Double Thick* (nominally 2 in.). Standard KIMSUL stops the greatest *proportion* of heat losses in winter and of heat infiltration in summer.

In a normal frame wall, Standard KIMSUL stops 54% of the heat which would normally be lost through an uninsulated wall. Double Thick KIMSUL stops 65% of the heat loss. Wall-thick insulation stops 73%.

The first inch of insulation does the most work. Taking the maximum heat stoppage through walls as 100%, it is readily calculated that Standard KIMSUL stops 74% of all the heat that can be stopped with any insulation.

KIMSUL Quickly, Easily Installed
Usually a one-man job. KIMSUL fits standard stud spacing, can be easily cut for narrow spacing, corners, etc.

KIMSUL Flexibility Solves Problems
KIMSUL comes compressed, is expanded when installed. Can be placed behind electrical outlets and pipes.

KIMSUL Does Not Settle
Rows of strong stitching keep the expanded KIMSUL blanket at proper density. KIMSUL stays "put".

GOING TO NEW YORK? We invite you to see KIMSUL at the Architects' Permanent Exhibit, Architects' Samples Corporation, Park Avenue and Fortieth Street.

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Back in '76 "Home Defense" meant defense not only against mortal foes but against the enemies architects still fight today—the elements themselves.

Out of those early storms a nation was born—a nation of homes. Prim Cape Cod cottages . . . rambling farmhouses . . . stately Colonial mansions. And many of those Early American homes live on today, landmarks to those who planned them well, and protected them with Pure White Lead.

America's first home guard, sturdy white lead, has stood faithful watch through the years—keeping houses sound, staunch—and young in appearance. Today it is still America's first line of home defense. The Dutch Boy is the dependable ally of the architect who builds for the future.

Dutch Boy Pure White Lead hugs tight, hugs long. And its gleaming beauty actually costs less by the year. For Dutch Boy wears slowly, *smoothly*—does not crack and scale—thus saving the expense of burning and scraping when it finally is time to repaint.

Make your work live on . . . protect it with Dutch Boy Pure White Lead—either the famous paste form or the new ready-to-use paint described at the right.

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111 Broadway, New York; 116 Oak St., Buffalo; 900 West 18th St., Chicago; 659 Freeman Ave., Cincinnati; 1213 West Third St., Cleveland; 722 Chestnut St., St. Louis; 2240 24th St., San Francisco; National-Boston Lead Co., 800 Albany St., Boston; National Lead & Oil Co. of Penna., 1376 River Ave., Pittsburgh; John T. Lewis & Bros. Co., Widener Bldg., Philadelphia.

NOW—THE NEW DUTCH BOY

Ready-to-use!

PURE WHITE LEAD PAINT

It's news! Pure White Lead—all ready to spread! Combining the proven durability of Dutch Boy with new, ready-to-use convenience.

2 COAT JOB—on New or Old Work!
FORMS—Exterior Primer & Outside White

The new Dutch Boy comes in 2 forms—Exterior Primer and Outside White—specially designed to do a real white lead job on old or new work in 2 coats. You have never specified a 2-coat combination that gives better sealing or hiding. And you'll find its whiteness, gloss and finish worthy of your proudest work.

SPECIFY *Dutch Boy White Lead*

To Conserve Zinc for National Defense

the manufacture of Anaconda 67 Brass Pipe is being discontinued

As of March 17, 1941, all distributors of Anaconda Pipe and Tube were notified that no new orders would be accepted for Anaconda 67 Brass Pipe.

The American Brass Company will continue to accept and fill orders for Anaconda 85 Red Brass Pipe, Copper Pipe and Copper Tubes, Types K and L. Anaconda 67 Brass Pipe may of course be obtained from distributors' stocks as long as these supplies last.

It is estimated that if all manufacturers of brass pipe adopt this policy, additional zinc at the rate of about 8,000,000 pounds a year will become available for metals vital to the National Defense Program.

4109

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from mine to consumer

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General Offices: WATERBURY, CONNECTICUT • *In Canada:* ANACONDA AMERICAN BRASS LTD., New Toronto, Ont. • Subsidiary of Anaconda Copper Mining Company.

HERE LUMBER GETS ITS *Plus*

It takes *punch* to drive a wood preservative down into the fibers where protection counts. That's why the *plus* in Wolmanized Lumber*—protection against decay and termites—is actually pumped into it by the vacuum-pressure process.

Only by hydraulic pressure in closed steel cylinders can real penetration and diffusion of preservative be attained. That is why Wolmanizing adds a *dependable* plus to lumber. And the natural advantages of lumber—its cleanliness, strength, paintability, ease of handling and freedom from odor—are unchanged.

Uniformity of Wolmanized Lumber is assured by technical control through one central laboratory, which checks performance in all of the eighteen Wolmanizing plants from coast to coast. The only product of its kind sold under one brand the country over, Wolmanized Lumber is distributed through retail lumber dealers. AMERICAN LUMBER & TREATING COMPANY, 1647 McCormick Building, Chicago, Ill.

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SWORN BASIC FACTS USED ARE FROM 1940 SWEETS CATALOG	Frame Bars 1½" deep	Ventilator Frame Bars 1⅝" deep	Muntin Bars 1½" deep	All weathering members hot rolled ⅛" angles	Rustless Bronze bearing cup pivot	Riveted Frame Corners	Welded Frame Corners	Riveted Ventilator Corners	Welded Ventilator Corners	Interlocked Muntin Joints	Welded Muntin Joints	Cam lock & push bar standard	Vertex Corners on ALL weathering members	⅝" Masonry Anchorage	Available with wrought iron sills or all wrought iron	Flat Outside Surfaces	Available in Toncan Iron	Available with Phosphate rust proofing	One-piece hot rolled frame section for outside glazing	Integral baffle on Ventilator Bar	
MESKER	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	NO	YES	YES	NO	85%
SASH-A	YES	YES	YES	NO	NO	YES	YES	YES	NO	YES	NO	NO	NO	NO	YES	YES	NO	YES	NO	NO	50%
SASH-B	YES	YES	YES	NO	NO	YES	NO	YES	NO	YES	YES	NO	NO	YES	NO	NO	NO	YES	NO	NO	30%
SASH-C	NO	NO	NO	NO	NO	YES	NO	YES	NO	YES	NO	NO	NO	NO	YES	NO	YES	YES	NO	NO	25%
SASH-D	NO	NO	NO	NO	NO	NO	YES	NO	YES	NO	YES	NO	YES	NO	NO	NO	NO	YES	NO	NO	30%
SASH-E	NO	NO	NO	NO	NO	YES	YES	YES	NO	YES	NO	YES	NO	NO	YES	NO	NO	YES	YES	NO	35%

MESKER STEEL SASH gives you at least 35% MORE QUALITY for your money!

Check the Steel Sash Merit Meter . . . and *believe your eyes.* There's no magic to this frank, easy-to-understand chart. It proves Mesker Steel Sash gives you at least 35% more quality for your money! It's simply based on cold, unembellished FACTS. Quality-minded architects, builders and dealers all over the country are referring to it constantly. Use it yourself . . . once . . . and you'll realize why. It's the *only* easy way to compare steel window quality features, point-by-point. It takes the guesswork out of steel sash specification work. It saves time, money, headaches. While detailing only Industrial Pivoted Sash features, it's indicative of the extra value built into *all* Mesker products. It's free for the asking. Mail the coupon today . . . no obligation.

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FEEL the difference
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I'm saving to marry our Architect

"He must like me, too... the care he took to guard my health." That's how she feels about the architect who made sure of T/N *one-piece* water closets in her home. America's most famous water closet—the T/N—provides the health protection essential to modern living. An atmospherically vented, non-syphoning ballcock effectively guards domestic water supply. And strong, yet quiet, flushing combines with the T/N's non-overflow as a further safeguard to health.

The Case distributor in your vicinity will gladly demonstrate the T/N. All Case bathroom fixtures are distributed nationally by plumbing supply wholesalers. Write for the nearest name and address to Dept. E-41, W. A. Case & Son Mfg. Co., Buffalo, New York. Founded 1853.

VALUABLE T/N FEATURES

FOR HEALTH PROTECTION—Non-overflow bowl, strong, but quiet flushing, and an atmospherically vented non-syphoning ballcock.

FOR QUALITY—*Twice-fired* vitreous china... Precision-built mechanism... quiet operation.

FOR ADAPTABILITY—Stands free from wall, only 18½" high from floor overall... Easily installed in corner, under window, beneath staircase, etc.

FOR ATTRACTIVENESS—The T/N is modern in design and procurable in 60 colors to fit any color scheme.

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DISTINCTIVE PLUMBING FIXTURES

AN EXCELLENT, **BLACK** DESIGN MATERIAL

PERMANENT, NON-REFLECTIVE, ECONOMICAL

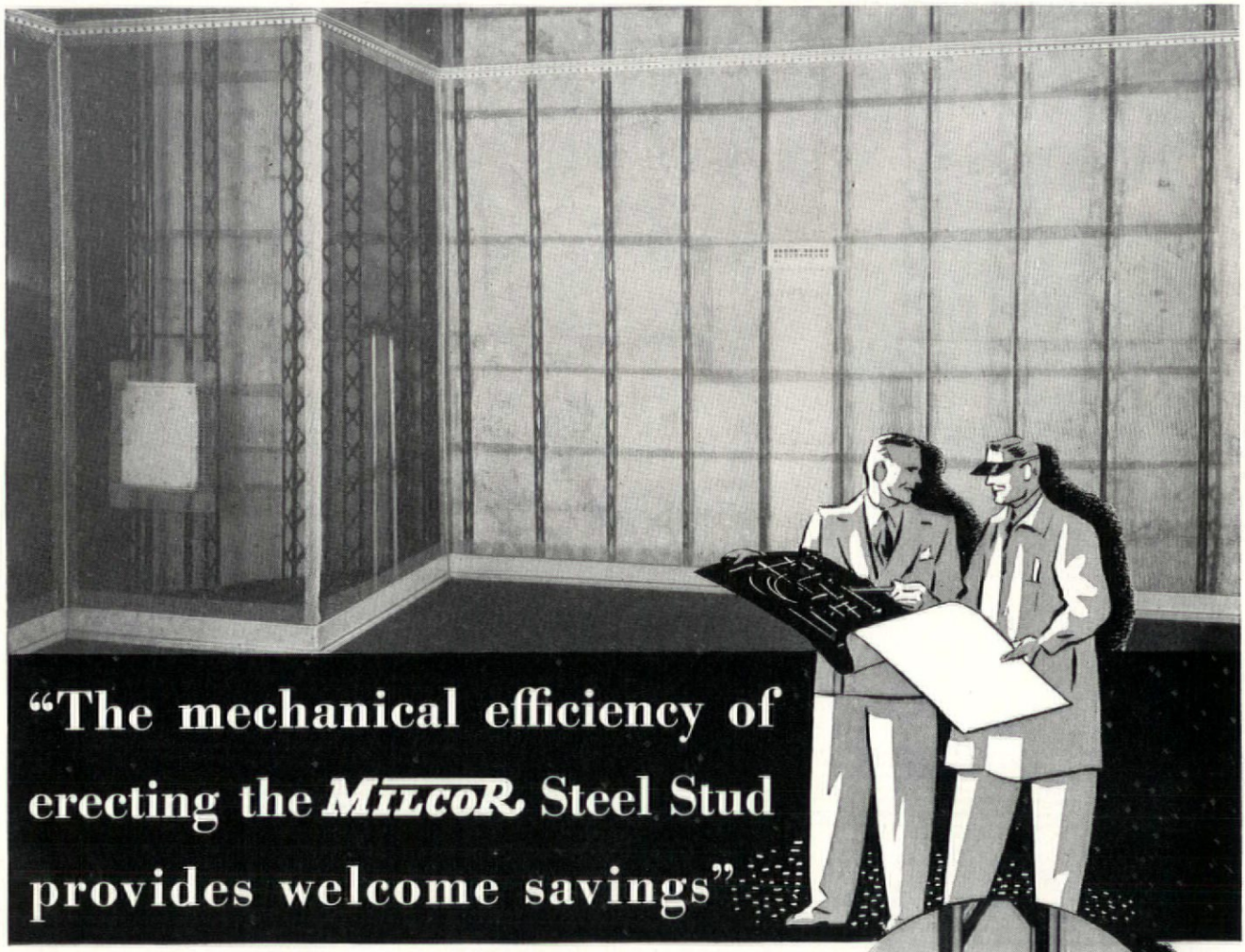
Alberene Black Serpentine bulkheads and panels: McCallisters, Caterers; Armand Carroll, Architect; both of Philadelphia, Pa.

Natural, quarried Alberene Black Serpentine increases in popularity steadily as more and more architects and designers find it ideal for black masses, and accents of black, on facades. The insets in the panels framing the glass-bricked entrance supply an interesting, decorative note. Structurally, Black Serpentine has much in its favor. It can be cut into sections as thin as 7/8", because it has great toughness and density. This makes it even more economical for panels, bulkheads, facing and spandrels. The stone will retain its color, and will maintain its finish, but it is neither reflective nor mirror-like. A request on your business letterhead will bring you samples, conveniently boxed, showing the range of stones, including black and mottled dark blues and greens. Please address Alberene Stone Corporation of Virginia, 419 Fourth Avenue, New York. Quarries and mills at Schuyler, Va. Sales Offices in principal cities.

Alberene

BLACK SERPENTINE

Moderate in cost . . . Negligible in upkeep



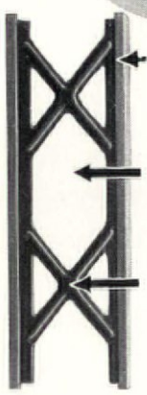
"The mechanical efficiency of erecting the MILCOR Steel Stud provides welcome savings"

Important where fire-safety, exceptional insulation value, effective sound resistance, and earthquake resistance are factors in your design . . .

Here's sound, economical construction that simplifies your fireproof hollow partition problems . . . The embossed, truss-design Milcor Steel Stud serves a three-fold purpose — as *studding, ceiling runner,* and *floor track.* With only one standard unit to consider, you eliminate confusion with materials and save time on the job. Patented shoes slip quickly into place, making firm attachments of the upright member to the ceiling runner and floor track.

Designed to combine light weight with functional strength, the Milcor Steel Stud permits easy installation of conduits, pipes, etc. The Milcor Metal Stud is engineered to produce — with Milcor Metal Lath — the finest, firesafe hollow partition possible today . . . a lasting guarantee of fine construction and satisfied clients. Send for free, colorful Milcor Steel Stud bulletin shown at right below.

F-161



1 CHANNEL SIDES *add strength. The extra flange provides a means for a positive lock for shoes, connections, wood blocks, and other attachments.*

2 LARGE, UNIFORM OPENINGS *provide a predetermined, exact location of all conduits or pipe lines in the wall. Spacing of opening is six inches on centers regardless of the size of stud.*

3 REINFORCED X-SHAPED MEMBERS. *The short-span X-shaped framing is reinforced by an embossed corrugation which extends into the channel sides beyond the opening.*

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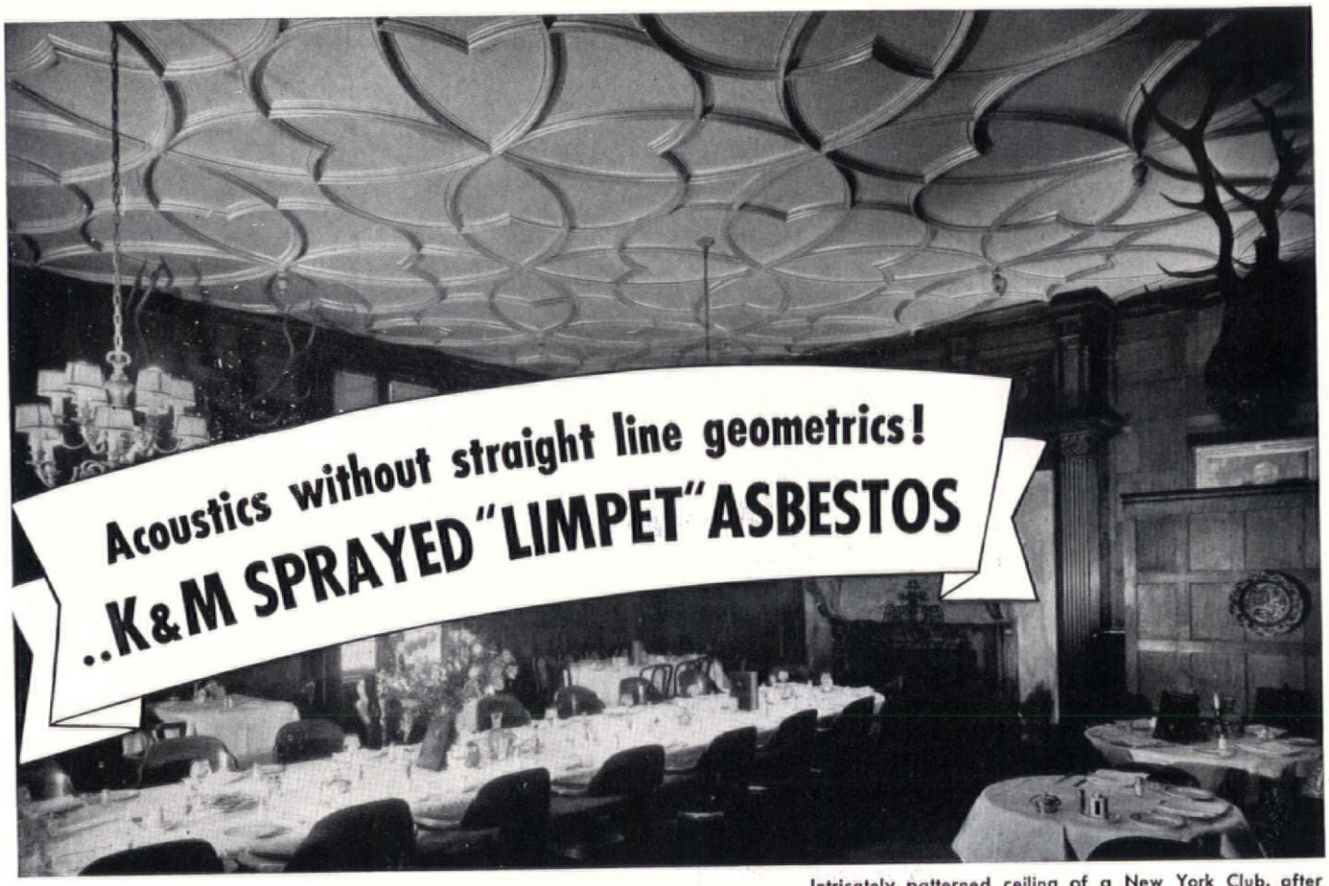

Intricately patterned ceiling of a New York Club, after acoustical treatment with K&M Sprayed "Limpet" Asbestos. McKim, Mead and White—Architects.

Keasbey & Mattison Sprayed "Limpet" Asbestos is a modern acoustical material that is as architecturally adaptable as plaster. It faithfully follows the contours of curved, recessed or irregular surfaces, and is applied almost as easily as paint itself. It creates no unwanted geometrical patterns.

No clearer illustration could be found than the ceiling of this dining room in a N.Y. Club. K&M Sprayed "Limpet" was readily applied, providing the desired acoustical effect without intruding in the slightest degree on the intricate pattern of the ceiling. This is but one example of the way K&M Sprayed "Limpet" unties your hands. It may even be painted over and over again without impairing its acoustical value.

Sprayed from a "gun," "Limpet" sticks tight to any clean surface, regardless of shape or composition without the need of mechanical systems or gadgets. Applied 1" thick on solid backing, it has a noise reduction coefficient of .70. Because of its method of application it may be built up to any practical thickness to provide the specified degree of sound absorption per square foot. Thus it is completely flexible architecturally and acoustically as well.

"Limpet" is fire-resisting, moisture-resisting and vermin-proof. It is extremely light in weight, and has the great additional advantage of being an excellent heat insulator, with a thermal conductivity of only .31 at 75°F.

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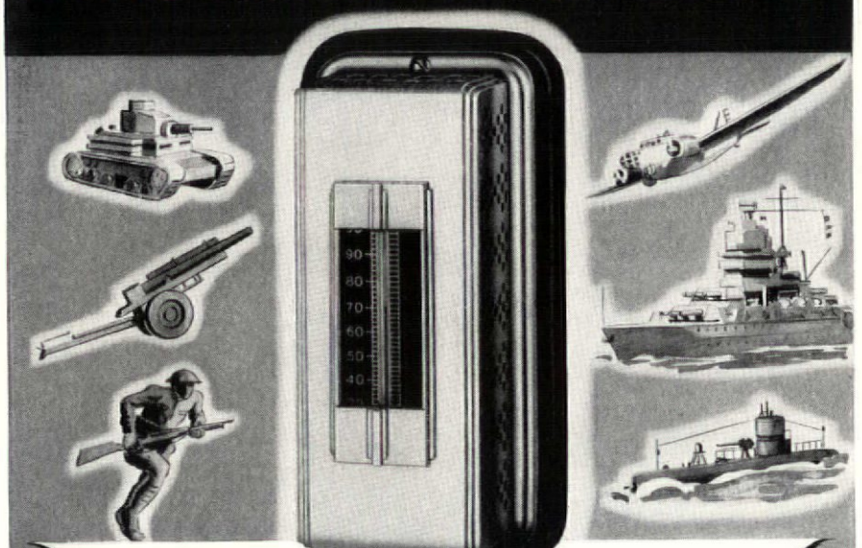

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Eclipse Machine Div., Bendix Aviation Corp., Elmira, N. Y.
Ohio Crankshaft Co., Cleveland, O.
Ford Motor Co., Aircraft Bldg., Rouge Plant, Dearborn, Mich.
Kearney & Trecker Corp. (machine tools), Milwaukee, Wis.
Kelsey-Hayes Wheel Corp., Plymouth, Mich.
E. I. du Pont, de Nemours & Co., Indiana Ordnance Works, Charlestown, Ind.
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North American Aviation, Inc., Dallas, Tex.
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Automatic TEMPERATURE AND AIR CONDITIONING *Control*

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MONTH IN BUILDING

(Continued from page 4)

the New York City Housing Authority he has under his care today fourteen projects—eight already in operation—involving an expenditure of more than $100 million and providing low rent subsidized accommodations for some 18,000 low income families. Unlike any other U. S. city, New York has several projects financed entirely with local funds; the others are USHA projects.

In his first annual report, Houser Swope last month shed interesting light on the operation of his fourteen charges and their cost to the taxpayers. Annual income in the form of tenants' rents will come close to $5.4 million, or about 5.4 per cent of the program's total cost, and will cover the projects' operating and administrative costs and provide the necessary reserves for repair, maintenance, replacements, vacancies, etc. Interest and amortization charges will be met with Federal, State and local subsidies.

Although tax-exempt, the projects are actually saving the city money, disproving the claims of many opponents of publicly financed housing. To wit: excluding the three projects undertaken prior to the establishment of USHA and present financing methods, the assessed valuation of the projects' sites subject to tax was $17.8 million, and the annual tax rate at the time of acquisition was about $3 per hundred. Taxes *collectible* on these properties thus amounted to $531,000 per year, but *actual collections* came to only about half this sum, $270,000. Interestingly, these properties now yield the city a total of $366,000 per year, a gain of $96,000 or 35 per cent. And, this gain does not reflect incidental savings in garbage collections, street maintenance and the benefits inherent in the replacement of substandard housing with fireproof, sanitary facilities. Moreover, total tax delinquencies on the slum properties at the time of their acquisition amounted to more than $1.2 million which were deducted from the purchase prices to the owners and dropped in the city coffers.

Also interesting is Houser Swope's comparison of city subsidies for transportation vs. housing. Three new projects financed wholly with the city's annual occupancy tax receipts provide housing for some 2,000 low income, resident, tax-paying families and cost about $500,000 per year for interest and amortization. On the other hand, the subways and elevateds serving nonresidents and persons who pay no city taxes, cost the city close to $30 million a year because the politically controlled nickel fares are far from sufficient to foot expenses.

In discussing his program before the New York Building Congress last month, Swope gave four pointed reasons why

(Continued on page 68)

WHAT No Moving Parts MEANS TO TENANTS AND BUILDERS:

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Mrs. A. C. Ford
742 S. W. Vista Ave.
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"Having used several kinds of automatic refrigeration in apartment houses, I feel that my present Servel Electrolux gas refrigerator is the perfect refrigerator, due to its silence, sturdy beauty, fast freezing and absolute dependability."

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Different from all others...

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The Kinnear Steel RoL-TOP is built in any size, with either motor or manual operation, and with any desired number of light sections. They are easy to install, in old or new buildings. Write today for complete information.

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MONTH IN BUILDING

(*Continued from page 66*)

private enterprise cannot, as yet, accomplish the task which his housing authority has assumed: 1) the low earnings of the lowest income group; 2) the high cost of land and, in turn, taxes in metropolitan New York; 3) high interest rates—Swope admitted that the Government's easy money policy had almost solved this problem; 4) the high cost of construction. Branding reason No. 4 as the most important and difficult problem, Houser Swope stumped left-handedly for a guaranteed annual wage for building labor, commented: "There is no thought of decreasing the earnings of labor on construction projects, but . . . high labor rates and consequently high cost of construction make it difficult, if not impossible, for skilled and well paid labor to dwell in the housing provided by their labor." Comparing industrial workers' wage rates, hours and earnings with those of building mechanics, Swope added: "Instead of maybe working 30 hours per week for say 26 weeks, he would . . . work 40 hours per week for 50 weeks with two weeks' vacation with pay. More houses could be built, his work would be steadier and cost of building would be less."

MORATORIUM

With early signs of spring came signs that the real estate depression may be considered a thing of the past. Thus, three separate statements have recently been made to the effect that property owners rescued from depression by the New York State mortgage moratorium law need no longer be mollycoddled. Passed in 1932 and renewed every year since, the moratorium provides that no mortgage in effect prior to July 1, 1932, may be foreclosed for nonpayment of principal if interest and tax requirements are promptly met.

First 1941 statement on the subject came from President George L. Bliss of the New York Federal Home Loan Bank. He pointed out that many safeguarded mortgages had been refinanced because the present low level of interest rates has enticed property owners to leave the "fancied protection" of the moratorium act. In other cases he noted that depreciation and obsolescence are removing whatever equity the owner may have possessed above the mortgage debt and that the passage of time is only aggravating this unhealthy situation. His proposal: where owners of mortgaged property refuse to make a reasonable payment on account of principal, the lenders should no longer be deprived of their right to foreclose. And, in the light of low interest rates and abundant mortgage money, he announced, "It would appear that no better time for lifting the mortgage moratorium can be hoped for. . . . From all available indications, it would appear that basic real estate conditions are

(*Continued on page 70*)

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Today more and more architects are discovering that the most *dependable* floor finish is *shellac*. Here's what impartial scientific tests revealed:

Shellac dries dust-free within a few minutes; no settling dust or grime can mar it during work.

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MONTH IN BUILDING

(Continued from page 68)

inclined toward material improvement for the first time in more than a decade."

Second statement in favor of a moratorium on the moratorium came from Chairman Orie R. Kelly of the New York State Bankers Assn. who is also president of the Lawyers Trust Co. He and the Association's legislative committee have publicly stated their belief that those New Yorkers who have earnestly desired to save their homes have voluntarily worked out a plan with their mortgagees providing for the repayment of principal and that the others are apparently less interested in retaining their homes than in capitalizing on the protection of the moratorium. Kelly's committee urged bankers the state over to protest another renewal of the moratorium, for "there seems to be an inclination on the part of the Legislature to coast along another year by granting a further extension."

Latest development was the discussion in legislative conference month ago of an amendment to the moratorium law, which would taper off its effect. Thus, chances are that when the plan has been put in bill form it will call for the demise of the moratorium at year-end as far as mortgages on revenue-producing properties are concerned and at the end of next year for all mortgages on owner-occupied houses. The Albany law makers are heading in the direction demanded by the bankers but are not going as fast nor as far as is desired. Bankers' hope is that Governor Herbert H. Lehman, long an advocate of tapering-off the moratorium, may speed them up.

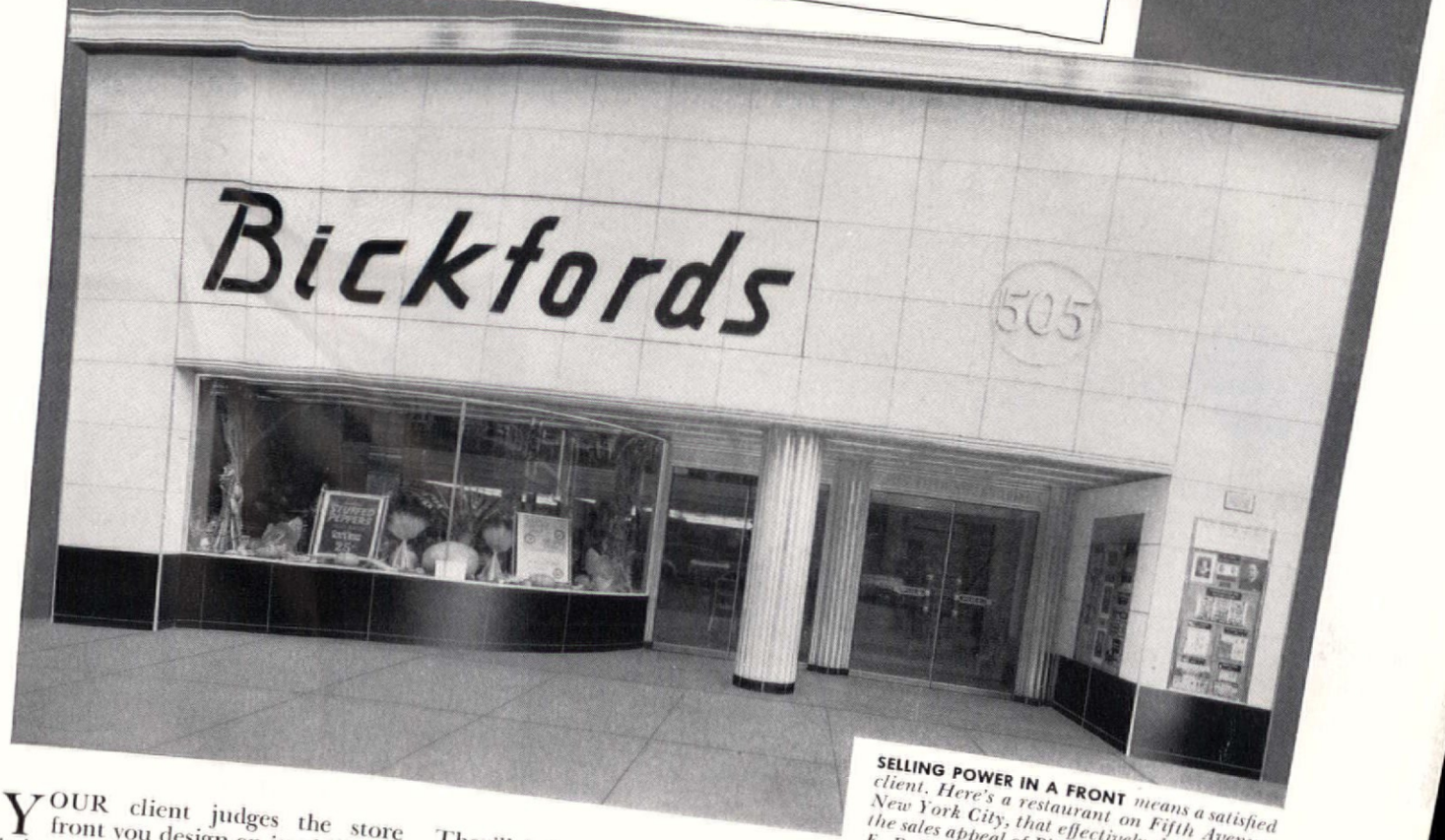
COTTON WALLS

To help the Federal Surplus Marketing Administration tap the South's huge backlog of cotton, the Washington, D. C. housing authority is experimenting with cotton insulation in one of its slum clearance projects (ARCH. FORUM, Feb. 1941, p. 2). Last month another potentially important use of cotton in construction came to light as the Department of Agriculture asked Seattle's Speedwall Company to send it a cotton-covered, prefabricated, demountable house for promotion purposes. Plan is to put the house on display in a patio formed by the Department's Washington office building, then send it on a six-month tour of principal U. S. cities.

A leading West Coast prefabricator, Speedwall uses room-size plywood panels in its construction system. Cotton is affixed to the face of all wall and ceiling panels with waterproof synthetic resin adhesive and is claimed to provide a "perfect" base for decoration with paint or wall paper and a better barrier against wind, cold and vapor. The new cotton-covered panel is now used in the prefabricated houses

(Continued on page 72)

HOW TO BE SURE THE FRONT YOU DESIGN will work for your client



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Pittco Store Front Products offer you genuine latitude in design. They'll help you achieve brilliantly the effects you want. These Pittco Products are ready to your hand: Carrara Structural Glass, both polished and Suede-finish. PC Glass Blocks and Architectural Glass. Pittsburgh Plate Glass. Herculite Tempered Glass and Herculite Doors. Tapestry Glass. A variety of Pittsburgh Mirrors. The new Sandaire process makes possible the fabrication of intricate glass lettering and glass designs for use on store fronts—thus broadening the decorative possibilities. And Pittco Store Front Metal lends the finishing touch.

Meant to be used together to create harmonious, unified fronts, Pittco Products have won undisputed leadership in their field. Mail the coupon, now, for more detailed information about them, and for many graphic examples of actual Pittco jobs which have *worked* for their owners.

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"PITTSBURGH" stands for Quality Glass and Paint

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If you have been unable to get MetaLane as fast as you want . . . and in the quantities you require . . . we offer an apology and an explanation.

It's an apology we're proud to make . . . an explanation we know you'll understand.

We're running behind on production and deliveries because the needs of National Defense come first . . . because certain basic materials that go into the manufacture of patented MetaLane are also highly essential to the production of defense equipment.

This is, we are sure, only a temporary condition which will be remedied just as soon as the first surging need of the defense industries levels off and their material needs may be more clearly seen. Meantime, we are continuing the steady production of MetaLane Weatherstrips and filling all orders to the limits of our capacity.

And while we're on the subject of defense and weatherstrips, remember that weatherstrips made of MetaLane are the Home Owner's best defense against the draft and dirt that filters into the house through windows and doors. MetaLane is the only weatherstrip material that won't corrode, oxidize or change color . . . that won't stain paint, stone or woodwork . . . that is not affected by salt atmosphere, smoke or alkalies. It has a spring-like quality of self-adjustment to be found in no other weatherstrip material. It's this spring-like quality of self-adjustment that assures "fingertip-control" when weatherstrips are made of MetaLane.

Even though the requirements of National Defense may slow down production and deliveries, MetaLane is the weatherstrip material that is worth waiting for. So—keep your orders coming, but be patient. We're "standing by" for Uncle Sam. Monarch Metal Weatherstrip Corporation, 6406 Etzel Avenue, St. Louis, Missouri.

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MONTH IN BUILD

(*Continued from page 70*)

which Speedwall sells on the regular market.

The Department of Agriculture display house contains five rooms, measures 32 x 24 ft., and is clothed in some 4,500 sq. ft. of cotton textile. It thus required only a small piece of the 1.25 million sq. ft. of cloth ordered by Speedwall in February. Speedwall apparently has orders in sight for 277 more houses of comparable size, although month ago Government officials, despite the company's boast of a demountable construction system, had not sent a defense housing contract its way.

LARGE SCALE SQUABBLE

No news is the fury raised almost daily when private enterprise feels that public housing is stepping on its toes. News indeed, however, is the cry of private enterprise against private housing. Such a cry went up in Los Angeles last month against the large scale housing project proposed the month before by Metropolitan Life Insurance Co. (ARCH. FORUM, Feb. 1941, p. 2) which is the world's second biggest private enterprise (biggest: American Telephone and Telegraph). The cry came from the mouths of Property Owner Mabel K. Ostby, Policyholder Marguerite Levan, the California State Apartment Conference and the Apartment Assn. of Los Angeles County, Inc. And, while it immediately concerns the constitutionality of enabling legislation passed by a special session of the California Legislature last December, the cry is essentially one of competition. As in its Parkchester project in New York City's Borough of the Bronx, the Met plans to shave costs by direct 100 per cent investment (no mortgage), direct construction and direct operation and thus achieve rents well below the local average for comparable new construction.

Until the Met-sponsored law was passed, the permanent ownership of rental housing projects by insurance companies was prohibited in California. However, they were permitted to deduct their local real estate taxes from the gross premium taxes collected by the State *. Under the new law, insurance companies which build and own housing projects must waive this tax deduction right. If the law or the waiver proviso is subsequently ruled unconstitutional, the operation of the projects would be governed by the previously existing law and the properties would have to be sold within a five-year period.

A property owner in the neighborhood of the Met's proposed new project, Mabel

(*Continued on page 74*)

* Figured at 2.6 per cent of annual gross premiums, the Met's California tax last year came to some $831,000, less the $118,000 it paid in real property taxes—a net of $713,000.

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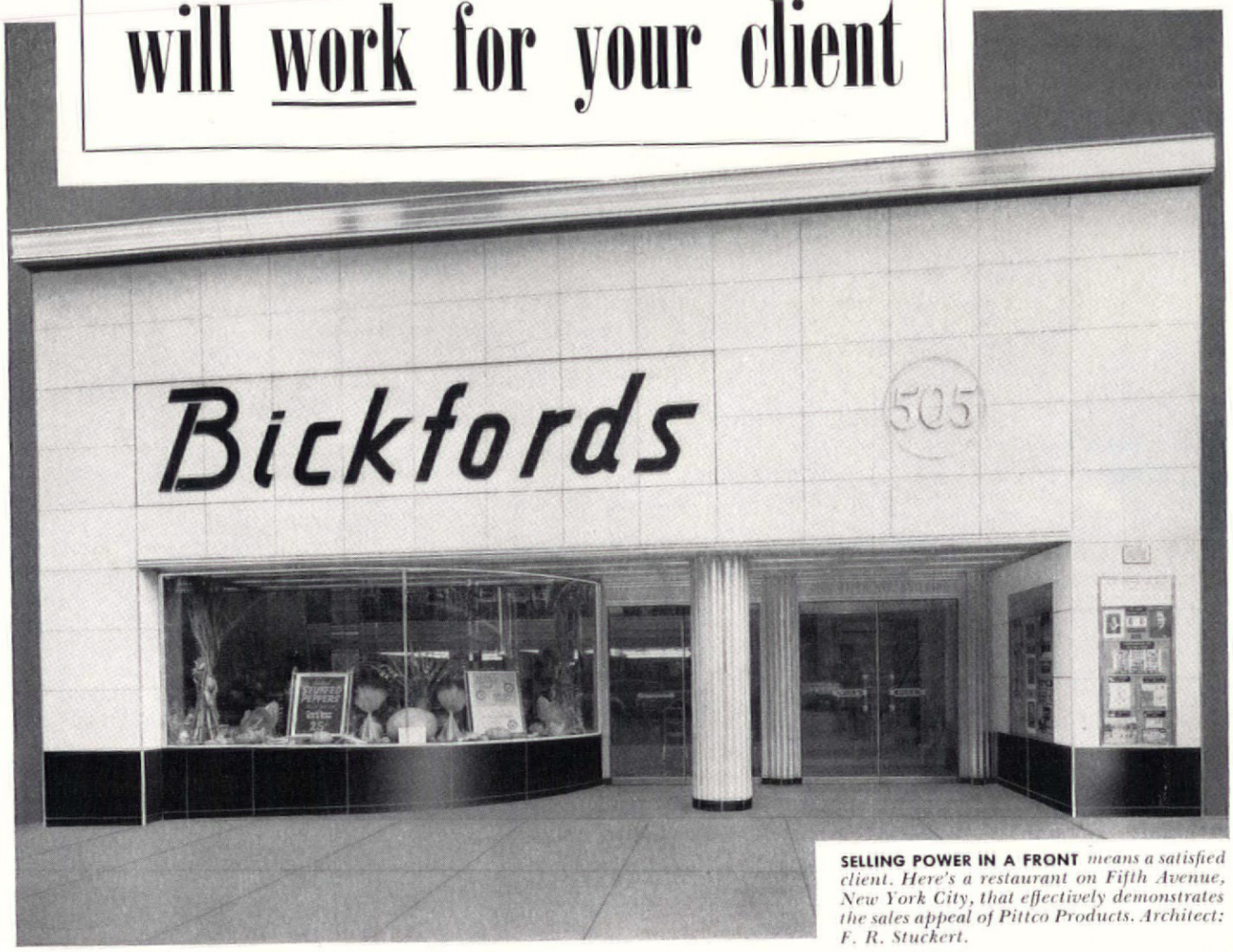
will work for your client



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NO MORE *"Thinking Twice"* ABOUT PERMANENT COLOR FOR WALLS . . . . .

Here is a beautiful, long-wearing material . . . practical even for limited budgets

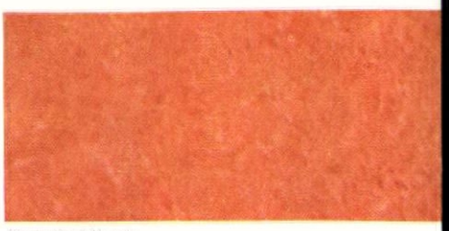


Illustration 1/4 scale.

Nairn Wall Linoleum, "Gladiolus Red," No. 7952.

Nairn Wall Linoleum, "Parchment," No. 7973.

Illustration 1/4 scale.

TWO PATTERNS in Nairn Wall Linoleum, creamy "Parchment" and "Gladiolus Red," perfectly color-correlated, increase the lasting beauty of this cheerful modern kitchen. It is completely sanitary and easy to clean. And think what elimination of annual redecorating means to the housewife in the way of savings in time, expense and bother.

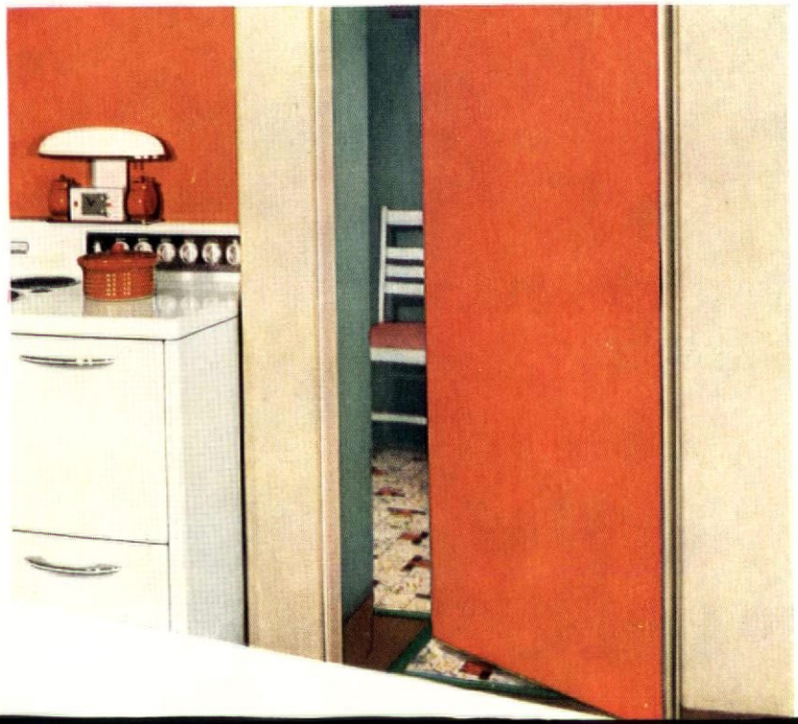
IN PLANNING distinctive decorative effects for any room, architects and builders need hesitate no longer about using permanent color for walls because of the price factor. Nairn Wall Linoleum—built to last as long as the house itself—is not only beautiful, but *moderate in cost* . . . entirely feasible even for small residences.

Available in a wide range of patterns—delicate pastels, rich dark tones, mottled and striated designs—Nairn Wall Linoleum will harmonize with every color scheme. And its extreme flexibility makes it adaptable to any structural design, permitting smartly rounded effects at inside and outside corners and openings.

When installed by Authorized Contractors, Nairn Wall Linoleum is fully guaranteed. Write for 16-page *free* booklet, "Nairn Linoleum for Floors and Walls."

CONGOLEUM-NAIRN INC., KEARNY, NEW JERSEY

NOTICE HOW this flexible material completely eliminates the necessity for door jambs . . . contributes a modern "streamlined" effect. The use of Nairn Wall Linoleum on doors need not be limited to new construction. Old, panelled doors may be filled with plywood and covered with this modern wall material.



NAIRN

Reg. U. S. Pat. Off.

WALL LINOLEUM

More for the money— Inside and Out!

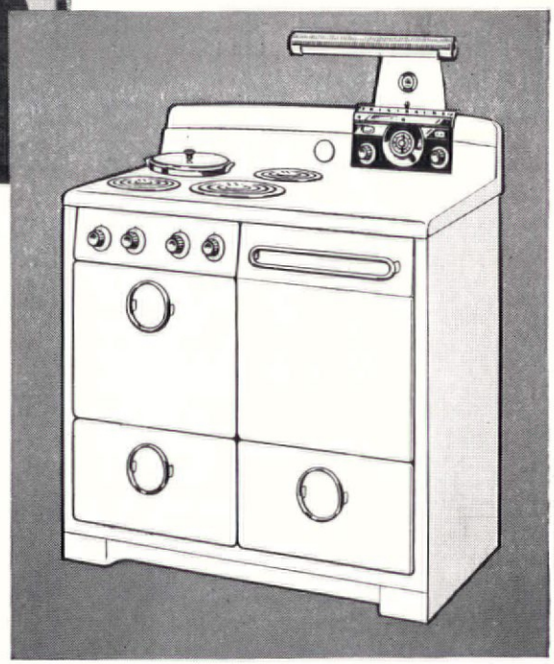
1941 FRIGIDAIRES

Why Tenants Prefer Them

Brilliant New Beauty! A world-famous designer has created for Frigidaire completely new concepts of refrigerator and range beauty for the kitchen. Brilliant new cabinet styles, with equally smart interior styling. Range innovations include ultra-modern fluorescent lighting.

More Useful Than Ever! New refrigerator food compartments are bigger and roomier with new frozen storage compartments up to 74% larger. Ranges have new Radiantube cooking units that are 18% faster. Both Frigidaire ranges and refrigerators offer a score of convenience features.

Use Less Current! Bigger 1941 Frigidaire Sixes have 22% more power to keep foods and freeze ice! Yet they *cost less to operate* than any previous comparable models. Exclusive new Radiantube units on ranges are 15% more efficient. Lowest cooking costs in Frigidaire history!



Frigidaire Offers Sensational New Values!

● The 1941 Frigidaire line offers a choice of more than a dozen brilliant refrigerator models and 6 beautiful ranges, including several models designed especially for apartment house use. Inside and out, these new refrigerators and ranges offer more for the money than even last year's great models. Every Frigidaire is a bargain-priced value.

● Choose from 6 brilliant new Frigidaire Electric Ranges in 2 great new series. Every one packed with convenience and economy features. (1941 De Luxe Model B-60 illustrated.)

Specify the favorite –

Specify Frigidaire

... over 6 million built and sold

(AF-4)

FREE! Architect's File Folder

Clip this coupon, attach to your letterhead and mail to Frigidaire Division, General Motors Sales Corp., Dayton, Ohio. Folder gives complete specifications on all Frigidaire Household Appliances—Electric Refrigerators, Ranges and Water Heaters.

ASK THEM WHICH LINOLEUM
they expect in your houses

TAKE A TIP *from the housewives you plan and build for. Give them smart, easy-to-clean Armstrong's Linoleum floors—the kind they know best. In this kitchen, the sink top and floor are No. 042 Monobelle Linoleum, with discs of No. 23 White. Walls are washable Armstrong's No. 737 Parchment Linowall—another product that makes houses more salable.*

CHANCES are that the vast majority of women will say *Armstrong's* Linoleum. Why? What is responsible for this flooring's overwhelming acceptance?

First, the product itself. The women you plan and build for know that Armstrong's Linoleum wears well . . . because they are using it now, or other women have told them so. They know it is comfortable, quiet, easy to clean. And they like the beautifully designed patterns and rich colors.

Second, Armstrong has been advertising this linoleum for 24 years. The famous "Armstrong Rooms" in these color advertisements have inspired many a woman to have a home of her own. So, naturally, women look for Armstrong's Linoleum in your houses.

Armstrong's Linoleum is *not* expensive. The economical Standard Gauge will appeal to you if you specialize in low-cost homes. Find out more about this quality flooring now. Refer to *Sweet's* and *Home Owners' Catalog*. Armstrong Cork Company, Floor Division, 1203 State St., Lancaster, Pennsylvania.

ARMSTRONG'S FLOORS
LINOLEUM

Rubber Tile - Linotile (Oil-Bonded) - Asphalt Tile - Cork Tile - Linowall Wall Covering

MONTH IN BUILDING

(Continued from page 72)

K. Ostby sought legally to restrain the Met on the grounds that vacancies were increasing, that rents were going down and that the successful operation of her apartment building would be jeopardized by the addition of the Met's 2,400 lower rent units. A temporary restraining order was granted, but month ago Superior Judge Emmet Wilson removed the legal barrier by ruling that Property Owner Ostby's competition argument was too weak to stand.

Judge Wilson also shot holes in the case of Marguerite Levan, a Met policyholder who likewise sought legally to nip the housing project in the bud. Her argument: if the enabling legislation is proved unconstitutional and the Met must promptly sell the project, the transaction might well entail a substantial loss to the disadvantage of the company and its mutual policyholders. The court, however, ruled that it was now impossible to determine whether or not the sale of the project would involve a gain or loss.

More moral than legal, the third hurdle placed in the huge project's way was an open letter by President E. N. Ayer of the California State Apartment Conference to the Met's Chairman Frederick H. Ecker, calling upon the insurance company to test the questioned constitutionality of the enabling legislation prior to the obtaining of building permits for the controversial housing project. The Conference claims that, should the law be voided and the former tax deduction procedure necessarily be followed, the State would lose some $600,000 annually—the estimated tax deduction for the $15 million Los Angeles project and a similar $10 million development scheduled for San Francisco. Moreover, in this case, the Met would enjoy an unfair competitive advantage over other insurance companies not permitted to build and operate such projects and over all owners' income producing properties.

Fourth voice to fill out the quartet of protestants was that of the Apartment Assn. of Los Angeles County. Expressed last month in a public statement by President John E. Owen, the Association's argument and conclusion are much the same as the State Conference's: "We do not believe that the Legislature intended that any insurance company should have a competitive advantage over other property owners—and particularly over property owners who may be borrowers of funds entrusted to the care of that company."

Mindful that these protests are aimed more at heading off a powerful and much needed low rent competitor than at protecting the interests of California citizens and the State tax structure, the Met fortnight ago announced that, barring further legal setbacks, the project would proceed at once.

IN 1851 – *the year of the* GREAT LOCK CONTROVERSY

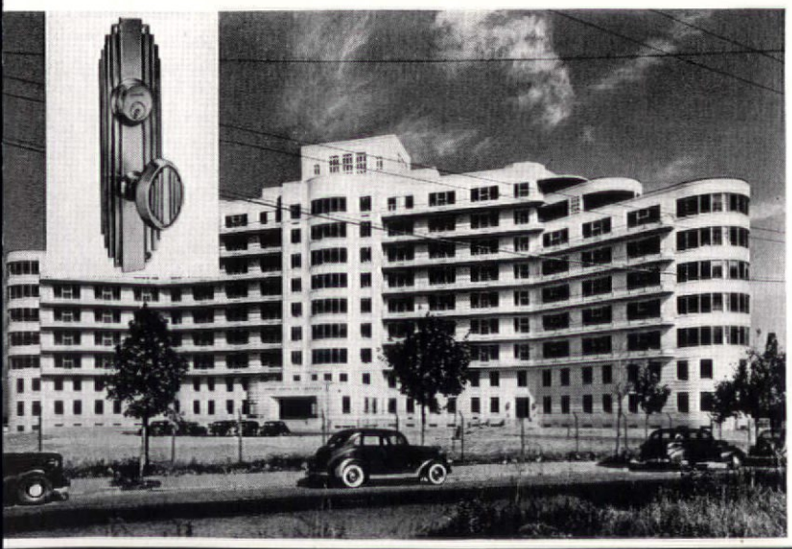
1851 . . . "a memorable year, a period which will ever form an epoch in the progress of the arts and of manufactures."

In that year, the Crystal Palace Exhibition was held in London. There, a conspiracy of silence was uncovered among English locksmiths who long had refrained from exposing the inadequacy of English-made locks. Alert American locksmiths picked the English locks with ease. Immediately, the London Times and other newspapers took up the controversy — and helped to end the era of simplicity in lock construction.

In that same year — 90 years ago — William Harbster, young, vigorous and farsighted, turned his blacksmith shop at Reading, Pennsylvania, into a manufactory of builders' hardware. Soon he was producing locks, bolts, latches and hinges which the architects of the country specified with pride.

IN 1898

In the History of Reading, published in 1898, appears this statement: "They continued to increase their trade year after year, making a specialty of furnishing large hotels and office buildings at New York, Philadelphia and Chicago, with all the necessary hardware. *In this they were very successful, for their unique and artistic designs in fine bronze obtained the preference with the most prominent architects and builders in the country.*"



TODAY... This year, Reading celebrates its 90th Anniversary. Good design, mechanical excellence and a reputation for service to the building industry are still gaining for Reading "preference with the most prominent architects and builders in the country." Many of today's finest buildings are equipped with Reading Hardware.

FOR TOMORROW... Day of great enterprise and fulfillment of architects' and builders' dreams — Reading has many plans. Plans that will reveal new beauties, new service values — that will add artistic and practical advantages to our buildings of the future. Reading Hardware Corporation, Reading, Penn., *Branch Offices:* New York, Philadelphia, Chicago, San Francisco.

A Reading Hardware Installation. Triboro Hospital for Tuberculosis, Jamaica, Queens, New York City. Eggers & Higgins, Architects.

GOOD HARDWARE **READING** SINCE — 1851

CELEBRATING 90 YEARS OF SERVICE TO THE BUILDING PROFESSIONS

No Matter What the Humidity...

...Here's a Hardwood Floor that Stays FLAT

● The widely varying humidities of spring and summer days have no chance to work their usual havoc when the flooring is Haskelite Compound Lumber. Compounded of waterproof-bonded veneers, Haskelite stoutly resists the tremendous expansive force that moisture exerts on wood . . . resists equally well the contraction that occurs when the building dries out. And instead of warping, cupping and buckling, Haskelite stays flat—and permanently beautiful.

That means hardwood flooring satisfaction as it's never been known before. It opens up to architects an opportunity to use *wood* for floors, where wood is the only material that satisfies design or utility requirements.

Look into Haskelite for the jobs now on your boards. Full details on its penetrated finish (a story in itself), its easy installation, sizes, etc., are in *Sweets, Sec. 11, Catalog No. 84.* For free samples, technical details, or other data, write us direct.

➤ ➤ ➤ ➤ ➤ *Eyes Right for More Facts on Haskelite* ➤ ➤ ➤ ➤ ➤

HASKELITE MANUFACTURING CORPORATION
Dept. A414, Flooring Division
208 W. Washington St. Chicago, Illinois

HASKELITE *Compound Lumber* **FLOORING**

HEADWAY & HEADACHES

(Continued from page 14)

In addition to the two "formal priority" actions, Stettinius' OPM division last month put fabricated aluminum parts, magnesium, neoprene (synthetic rubber) and commercial aircraft in the "allocation" classification. Allocations are officially defined as "cases in which the (priority) principle has been employed on a broad scale, action being taken in the form of specific allocations, with or without actual issuance of ratings."

A third classification, labeled "cooperation," is comprised of cases in which the general principle of the priority system has been applied informally and on a voluntary basis. Officially classed in this group last month, along with zinc and potassium percholorate, were structural steel shapes and stainless steel. Said Stettinius of the former: "Efforts to expedite the flow of structural steel shapes into defense construction were inaugurated when consumers began to experience difficulties in obtaining these necessary construction supplies on short delivery. As a result of a conference between representatives of the Priorities Division and the steel companies, producers have undertaken to fill defense orders as promptly as possible." (Orders for fabricated structural steel booked by the industry in January totaled 258,499 tons, up 130 per cent from the monthly average for the past ten years. At 150,375 tons, January shipments almost equalled the twelve-month total for 1931.)

PREFABRICATION

Since THE FORUM last month reported (p. 174) the conspicuous neglect of the prefabricated house industry by Government's non-Navy defense housers, several newsworthy developments have occurred. Most important, the Public Buildings Administration let its first contract—small but significant — for prefabricated houses, quickly followed it up with five others. To Cleveland's E. F. Hauserman Co., a newcomer in the prefabrication field but a long-standing manufacturer of demountable steel office building partitions (many of which subdivide Washington Government buildings, including PBA's) went the honor of receiving the first contract for twenty houses at an erected cost of $61,752 or $3,088 per unit.

Covering 50 houses each, the other contract awards went to: 1) Standard Houses Corp. of Chicago, another prefabrication upstart (ARCH. FORUM, Jan. 1940, p. 66), on a bid of $141,550 or $2,831 per unit. 2) Home Building Corp. of Kansas City, a small, almost-unknown organization, at $127,000, or $2,540 per unit. 3) Allied Housing Associates, Inc. of Langhorne, Pa., a fabricator of Homasote "Precision-Built" houses and producer of Homasote's guinea pig defense house (ARCH. FORUM,

(Continued on page 77)

HEADWAY & HEADACHES

(Continued from page 76)

Dec. 1940, p. 531), at $134,600 or $2,692 per unit. 4) National Homes Corp. of Lafayette, Ind., a highly successful one-year-old (ARCH. FORUM, Mar. 1941, p. 178), at about $149,900 or $2,998. 5) Tennessee Coal, Iron and Railroad Co. of Birmingham, Ala., the nation's No. 1 steel house prefabricator (ARCH. FORUM, Feb. 1941, p. 84), at $138,900 or $2,778 per unit.

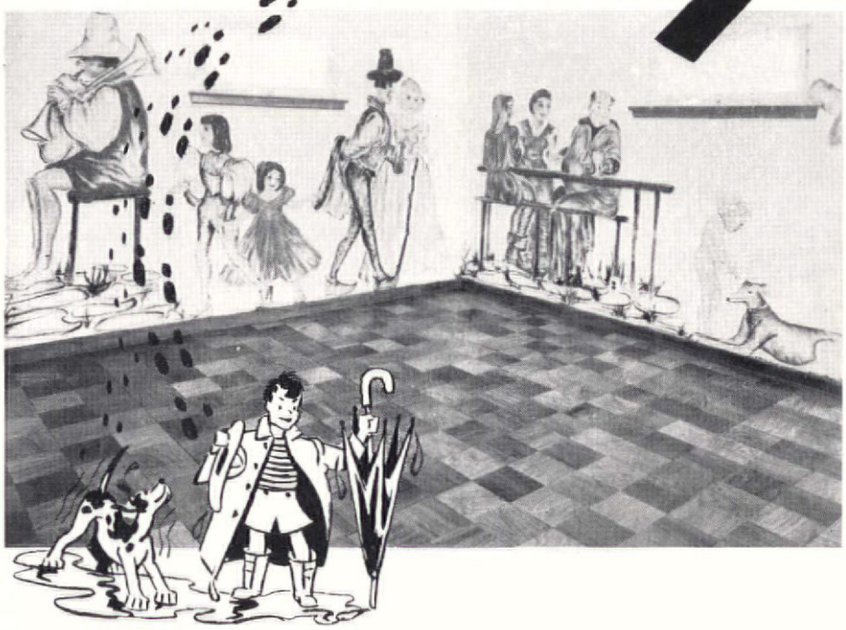
All six contracts covered the erection of houses at PBA's ballyhooed but belated prefabriaction "demonstration" project at Indian Head, Md. And, all six require that the prefabricators handle the erection of their house parts, either by themselves, or via a subcontractor. This is a concession on PBA's part, in that the agency formerly insisted that all defense housing projects be entrusted to general contractors, many of whom are unsympathetic to prefabricated construction systems. Only general contractor at Indian Head is the George Hyman Construction Co. of Washington, D. C. whose $469,500 contract covers merely grading, road building, utility installation and other site preparations. (Thus, the unit costs quoted above pertain only to the actual houses.)

With the exception of the Hauserman contract, all of them contain an "escalator" clause which gives PBA the option of ordering additional houses from these prefabricators at the same unit prices. Chances are that this clause will be invoked and that these companies will be asked to build most of the 650 houses scheduled for the site. Reason: other prefabricators, including the industry's leaders, have balked at PBA's demand that they quote guaranteed erected prices while builders of conventional houses are privileged to work without risk under cost-plus-fixed-fee contracts. They held out for a combination deal involving a guaranteed delivery price and a cost-plus erection contract, but PBA would not budge. At mid-month, it appeared that if any other prefabricators were added to the Indian Head list they would be PHC Housing Corp. and Humphrey Horsley Co., two little known outfits which have barely emerged from the experimental stage.

Three other contracts for prefabricated defense houses are bigger, non-demonstration and somewhat startling in their details: 1) To McCloskey & Co. of Philadelphia, a top-notch contractor but novice prefabricator, a $966,000 order with a $44,000 fee for 250 houses and their roads and utilities at Aberdeen Proving Grounds at Havre de Grace, Md. 2) To Engineers Ltd., general contractors of San Francisco, a $3 million order with a $105,000 fee for 316 "permanent" units and 608 "prefabricated, demountable" units at the Mare Island Navy Yard at Vallejo, Calif.—no details as to the sub-contracting prefabricator. 3) To the new Day Housing Corp. of New York.

(Continued on page 80)

Even in Basements . . .



. . . This Floor Stays FLAT

● The one thing that's needed above all else in a basement finish floor is *inertness* to moisture. That's a requirement completely and successfully met for the first time in a WOOD floor with Haskelite. This "successor to solid wood floors" stays flat, without warping or cupping, in the face of the long, humid months that are just ahead . . . yet offers, as no composition flooring can, the comfort, beauty and warmth, characteristic of wood alone.

Both Haskelite Block and Plank are furnished in prime oak, rotary cut from selected logs with a medium or dark factory-applied finish. It's a unique "penetrated" finish that permits local touching up or removal of soiled or worn spots without refinishing the entire floor.

Make it a point to have full details on Haskelite ready for discussion with your next clients.

See Opposite Page for Details on Plank

HASKELITE MANUFACTURING CORPORATION
Dept. A414, Flooring Division
208 W. Washington St. Chicago, Illinois

HASKELITE *Compound Lumber* **FLOORING**

Carrara IS PRECISION-MADE FOR BEAUTY THAT ENDURES

EVERY piece of Carrara Structural Glass is mechanically ground and polished* to a true, flat surface. It is a finely-machined product, possessed of reflective qualities and depth of color impossible to achieve in any glass not precision-made. Carrara joints are smooth and without lippage. Carrara will not warp with time. It will not check, craze, stain, fade or absorb odors. Chemicals, moisture, pencil marks are powerless to harm it. It is easy to clean with a damp cloth. It stays young and new-looking through the years.

This is a quality structural glass, ideal for scores of architectural uses. Here are a few of them: toilet room walls and partitions, lobby and reception room walls, sill covers, niche linings, shelves. And the glass can be decorated by shading, fluting, sandblasting, etching, painting and laminating to create striking effects.

Write for our free booklet "Carrara, the Modern Structural Glass." It is full of facts and illustrations. Address Pittsburgh Plate Glass Co., 2095-1 Grant Building, Pittsburgh, Pa.

**The new Suede-finish Carrara has its surface reflections softened by a special treatment after grinding and polishing.*

"PITTSBURGH" stands for Quality Glass and Paint

Here is a reception lobby in an office building which shows the design possibilities of Carrara Glass. Ivory and Forest Green Carrara are used to create attractive, reflective walls. Note that Carrara can be bent, as at the end of the built-in divan. There are ten appealing Carrara colors to choose from.

CARRARA

The modern Structural Glass

PITTSBURGH PLATE GLASS COMPANY

Hospitality

is expressed in rooms of Genuine White Pine. They create that atmosphere of warm informality, while retaining an air of confident dignity.

Genuine White Pine is pleasant to live with because it is so beautiful in all its wide variations of decorative treatment. It grows old gracefully, mellows with time.

This famous lumber also makes its bid in the interest of economy, which recommends it for the modest cottage as well as for the best home. Rooms of White Pine, oiled, waxed, stained, enameled or painted require decorating less frequently.

In fine paneling work the wood must nail easily without splitting. It must stay put under service conditions. These requirements are admirably met by Genuine White Pine.

CLEARLY IDENTIFIED . . . ACCURATELY MILLED

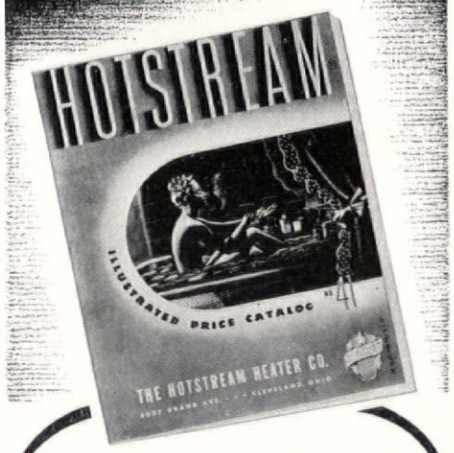
4-Square Genuine White Pine has all the ready-to-use improvements of other 4-Square species. It is accurately manufactured to exact standard lengths with smooth, square ends and surfaces. The ends of each piece are plainly marked "Genuine White Pine" and "Weyerhaeuser 4-Square."

Genuine White Pine is neither scarce nor expensive. Modern methods of harvesting timber as a crop insure a bountiful supply of this famous lumber for the years to come.

WEYERHAEUSER 4-SQUARE LUMBER

WEYERHAEUSER SALES COMPANY
FIRST NATIONAL BANK BUILDING • SAINT PAUL, MINNESOTA

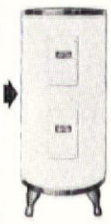
WHY GUESS ABOUT *Water Heating?*



HOTSTREAM 41 CATALOG *gives you the complete "True Story"!*

235 styles and sizes—the most complete line of water heaters in the world—are described in this book. It also gives you all the information needed to recommend, specify and install *exactly* the right unit—regardless of size, budget, or fuel requirements.

HOTSTREAM "TABLE TOP" For the built-in modern kitchen. For electricity and every kind of gas. 6 styles and sizes.

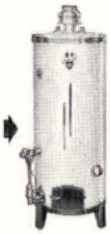


ROUND ELECTRICS Approved by Underwriters', TVA, EFHA, REA, Edison Electrical Institute and Utilities. 13 styles and sizes, from 10 to 82 gallons.

OIL-BURNING AUTOMATIC Perfect answer when neither gas nor electricity are available. Yields 1531 gal. hot water for only $1.00 (80° rise). 30 and 40 gallon capacities.

HOTSTREAM "FEATURE" This deluxe unit is "Best by Test." Incorporates numerous exclusive features. It's "tops" in performance and economy. Guaranteed 20 years. 18 styles and sizes.

HOTSTREAM "CABINET" For any kind of gas or electricity. Gleaming white Dulux cabinet. For modern kitchen or finished basement. Guaranteed 10 years. 14 styles and sizes.



HOTSTREAM "DIXIE" Popular medium priced gas unit. 24 styles and sizes. Guaranteed 10 yrs.

This book will be an invaluable reference to you on the science of water heating. Write for your copy now.

THE HOTSTREAM HEATER COMPANY
8007 Grand Avenue • Cleveland, Ohio

HEADWAY & HEADACHES

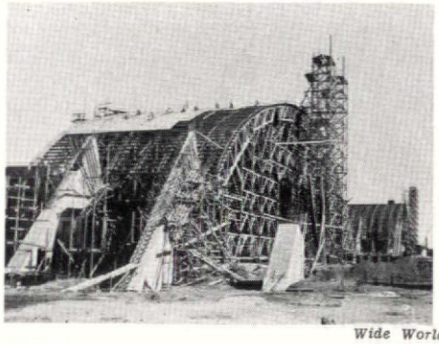
(Continued from page 77)

an order for 500 units from Wheeler Construction Co. of New York, general contractor for the Camden, N. J. project being handled personally by Col. Lawrence H. Westbrook, assistant to Federal Works Administrator Carmody. The prefabricating subcontract for these houses for CIO shipyard workers was first offered to American Houses, Inc. with the provision that a new CIOrganized fabricating plant be erected near the project's site. American Houses argued that its AFL-operated Kearny, N. J. plant, connected with the site by super highways, was near enough, thus lost the business. Forthwith, Joseph P. Day, famed real estate auctioneer and American Houses' salesman, struck out on his own, formed a prefabricating company, landed the Camden contract.

Another significant development of the month on the prefabrication front was a conclave of the industry in Washington which presented its case to Government officials and discussed the formation of a trade association. Through Spokesman Foster Gunnison, president of the pioneering Gunnison Housing Corp. of New Albany, Ind., the prefabricators advised Federal Works Administrator John M. Carmody and his PBA underlings that it would be ruinous for them to bid for defense contracts on a guaranteed erection cost basis. Reason: there is no telling how well or how economically an inexperienced contractor might erect their house parts, and, under conditions prevailing at most defense housing project sites, there is no telling how much it would cost the prefabricators themselves to assemble the parts. Hence, their stand for a guaranteed delivery price and a cost-plus erection price.

At a supper meeting, the prefabricators heard the proposal for organization of a trade association, generally approved of it, but failed to take definite action. As outlined in a preliminary prospectus, the association would have a minimum annual budget of $40,000, cash for which would

(Continued on page 82)



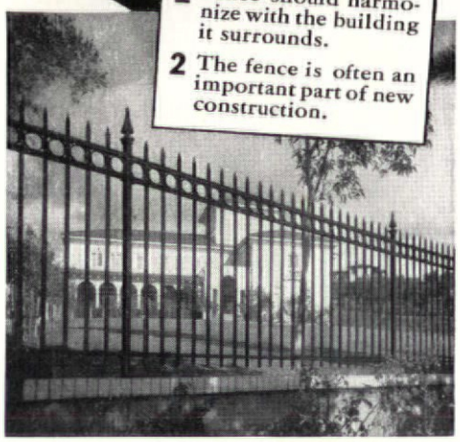
Wide World

Centering for the huge supporting arches of Flying Fortress hangars reveal the shape of buildings to come at Airdrome Boringuen, an Army Air Base on the tip of Puerto Rico. The $16.4 million project is in the hands of Architect-Engineers Graham, Anderson, Probst & White and Contractors McCloskey & Co.

SHOULD ARCHITECTS SPECIFY FENCE? *Yes-Because*

1 Fence should harmonize with the building it surrounds.

2 The fence is often an important part of new construction.



WHY DO MANY ARCHITECTS *Specify* **ANCHOR-WELD IRON FENCE?**

1. For BEAUTY: Architects specify Anchor-Weld Iron Fence because its unusual strength makes center-supports and cross-bracing unnecessary. Each panel will support one ton of distributed load. Made in a wide selection of standard designs or to your own individual requirements.

2. For STRENGTH: Anchor-Weld Iron Fence is *electrically* welded under high pressure to ensure permanent, inseparable joints. Pickets and rails simply cannot loosen, or sag!

3. For PERMANENCE: Welded construction *plus* rails as heavy as pickets assures permanent alignment. Anchor Copper Bearing Steel assures maximum resistance to weather and moisture.

Learn how Anchor-Weld Iron Picket Fence lives up to your ideal Fence specifications. Mail the coupon below for catalog and a Sample Weld (makes an attractive paper-weight). No obligation, of course.

CHAIN LINK
IRON PICKET
RUSTIC WOOD

ANCHOR FENCE

Mail This Coupon Today

ANCHOR POST FENCE CO.,
6635 Eastern Ave., Baltimore, Md.
Please send me ☐ Anchor-Weld Iron Fence Catalog ☐ Anchor-Weld Sample ☐ Name of nearest Anchor Fence Engineer.

Name.....
Firm.....
Address.....
City..... *State*.....

OF COURSE AN ARCHITECT WOULDN'T SPECIFY
A BUNGALOW DOOR FOR A COLONIAL MANSION . . .

THEN—WHY SO MANY FINE BATHROOMS EQUIPPED WITH PUNY CABINETS?

WE often wonder why so frequently you find truly gorgeous bathrooms equipped with cabinets that are entirely inadequate, both as to appearance and for properly serving the needs of the family.

Frankly, we can't understand it, unless perhaps some architects are not fully familiar with the incomparable nature of MIAMI Cabinets and the astonishing breadth of the MIAMI Line.

Of course we do not suggest an expensive cabinet for the bathroom that doesn't deserve it. But we do believe a really fine bathroom is entitled to a MIAMI Cabinet or ensemble that is consistent in quality and price with the other appointments.

The MIAMI Line includes cabinets that meet the exact requirements of every type home, from cottage to mansion — cabinets and ensembles, with extra recessed shelves and towel space, that are correct in size and completeness to properly serve the needs of any family.

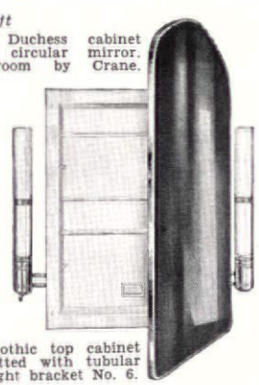
MIAMI service can assist you in planning bathrooms of beauty and distinction for any home, hotel or institution. See Catalog in Sweet's, talk to our representative, or write us, Department AF.

MIAMI CABINETS

AND ACCESSORIES

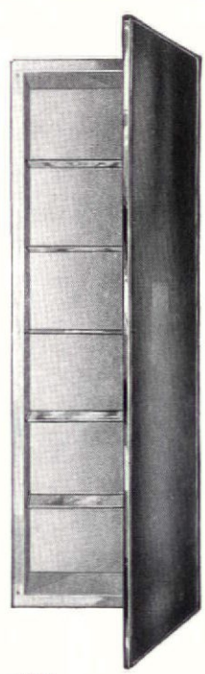
MEET EVERY NEED—EVERY PRICE CLASS
SPECIFY ADEQUATE CABINETS FOR YOUR BATHROOMS

At Left
The Duchess cabinet with circular mirror. Bathroom by Crane.

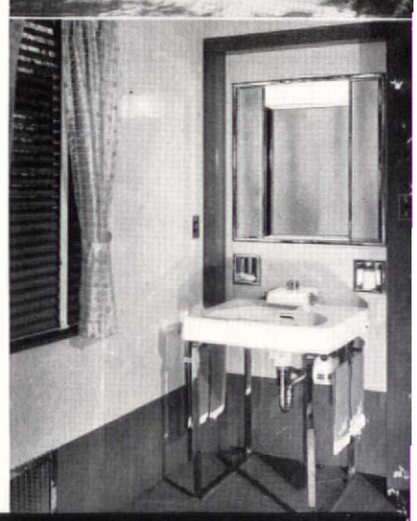


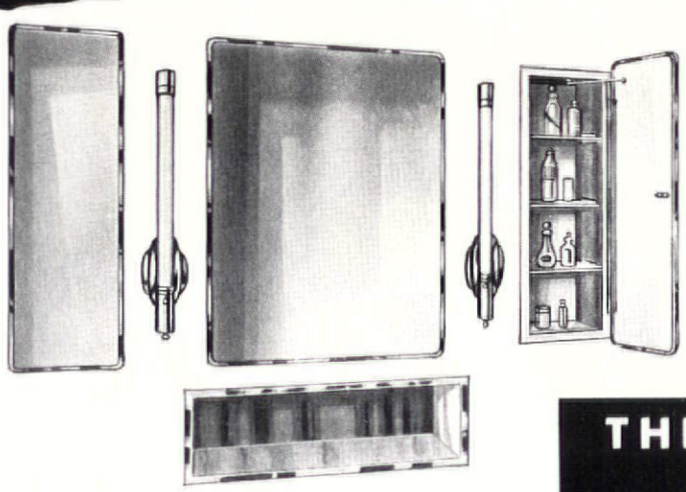
Gothic top cabinet fitted with tubular light bracket No. 6.

Above
Mirror lined recess shelf No. 900.



Right
Towel supply cabinet No. 510. 20" by 60".

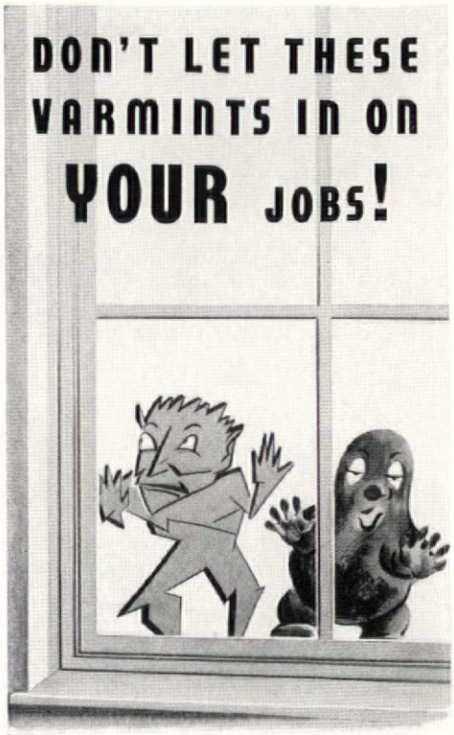




Left
Master Ensemble: Center mirror, two side cabinets, two fluorescent light brackets, recessed shelf.

Right
Imperial cabinet in home of H. J. Lang, Cleveland. George B. Mayer, Architect.

THE MIAMI CABINET DIVISION
THE PHILIP CAREY COMPANY
MIDDLETOWN, OHIO



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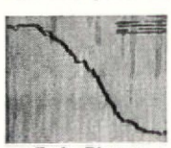
For WALLS and CEILINGS

Plaster cracks and soiled walls have no place in today's modern homes. So *out* with old Double Trouble—prevent the ruin of walls and ceilings in the homes *you* plan. Specify Wall-Tex *fabric* wall coverings. Then you'll *protect* and *preserve* the beauty of interiors.



Ends Plaster-Crack Troubles

Wall-Tex is a sturdy and repeatedly washable wall canvas that actually becomes a structural supporting part of walls and ceilings. It discourages cracks from forming—hides them if they should occur, provides enduring beauty.

Repeatedly Washable —Keeps Like New!

Wall-Tex comes in plain canvases (ideal as a base for paint) and more than 200 decorative patterns. Smart, modern, *protective.* Include Wall-Tex in *your* specifications. It will please your clients—and increase the value of their property.

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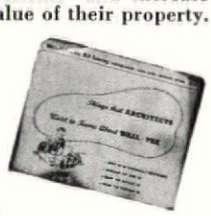


Columbus Coated Fabrics Corporation
Dept. AF-41, Columbus, Ohio

Send your building and architectural data file and swatches of Wall-Tex to—

Name .....

Street & No. .....

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

HEADWAY & HEADACHES

(Continued from page 80)

come from dues payments of $10 per year per house produced by regular members (minimum: $600 per year) and from flat $1,000-$5,000 annual fees to be collected from various classes of associate members (non-prefabricators interested in the expansion of the industry). With this money the projected association would among other things, 1) develop and coordinate the common interests of its members, 2) combat anti-prefabrication forces, 3) foster the mass purchasing of houses by Government and private consumers, 4) assist in the establishment of uniform building codes which would recognize the structural qualities of prefabricated houses, 5) maintain a systematic information service, 6) launch a publicity and public relations program, 7) study the possibility of forming a transportation bureau which might engineer the combination of l.c.l. (less than railroad carload lot) prefabricated house shipments into full and less expensive carload shipments.

CANTONMENT COSTS

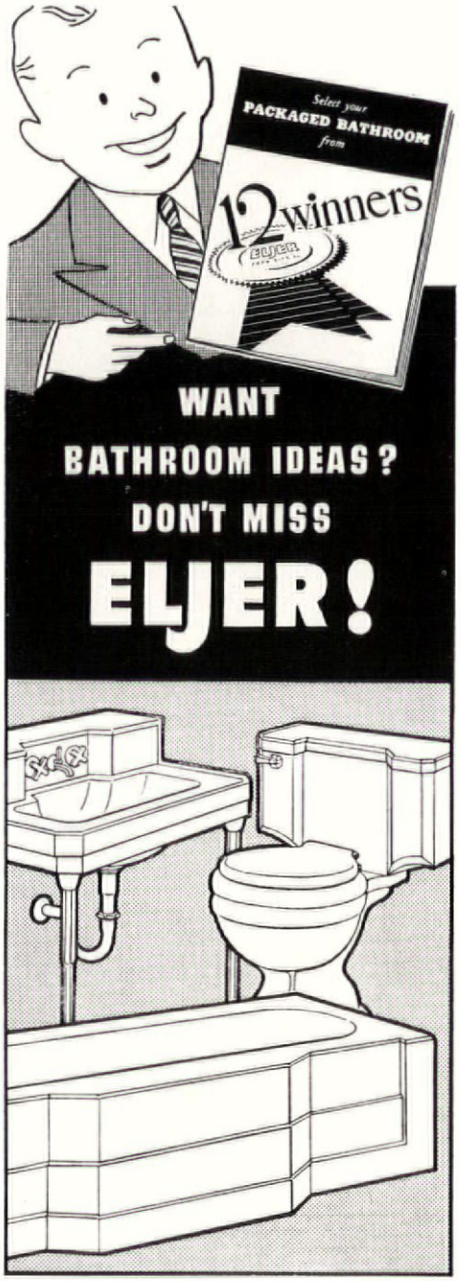
With the passage last month of the $1.5 billion Fourth Supplemental National Defense Appropriation Bill came the official explanation of the unexpectedly high cost of the Army's cantonment construction program. Briefly, the reasons and their relative importance are these: 1) changes in plans and underestimates of costs, 15 to 25 per cent; 2) advances in material costs and labor wages, 25 to 35 per cent; 3) enlargement of the program, 50 to 60 per cent.

Worthy of particular note in the War Department's $695 million appropriation are the $339 million covering the completion of cantonment construction already under way, the $236 million for additional construction required to complete the cantonment program, the $15 million for the launching of engineering surveys.*

Construction completion. Anticipating the questions that Congress would ask when he submitted his request for more money, Col. Brehon B. Somervell launched a thorough survey of the cantonment program when he was made Chief of the Quartermaster Corps Construction Division in mid-December. Entrusted to Engineers Slaughter, Saville & Blackburn, Inc. of Richmond, Va., the survey covered 58 fixed fee contract jobs and 44 lump-sum contract jobs —a large enough sampling to produce data typical of the entire 186-project program. In general, the engineers concluded that the construction program exceeded the Army's original $609 million estimate because:

(Continued on page 84)

* The Navy Department's $738 million request included in the appropriation bill was only $1.3 million more than the original Budget Estimate, and is not discussed herein.



Designs that challenge comparison . . . beauty that wins the hearty approval of home buyers everywhere . . . that's what Eljer plumbing fixtures have to offer you—and that's what you are looking for, isn't it?

SEND FOR ATTRACTIVE FULL-COLOR BOOKLET TODAY!

ELJER CO., Ford City, Pa. AF-4

Please send full-color booklet "12 Winners."

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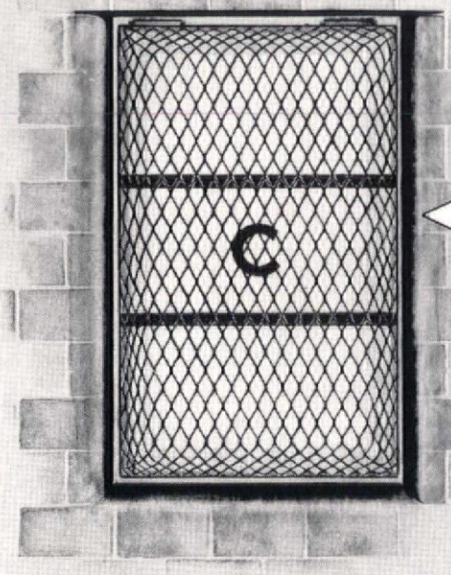


Now YOU CAN SPECIFY

Steelcrete *Expanded Metal*

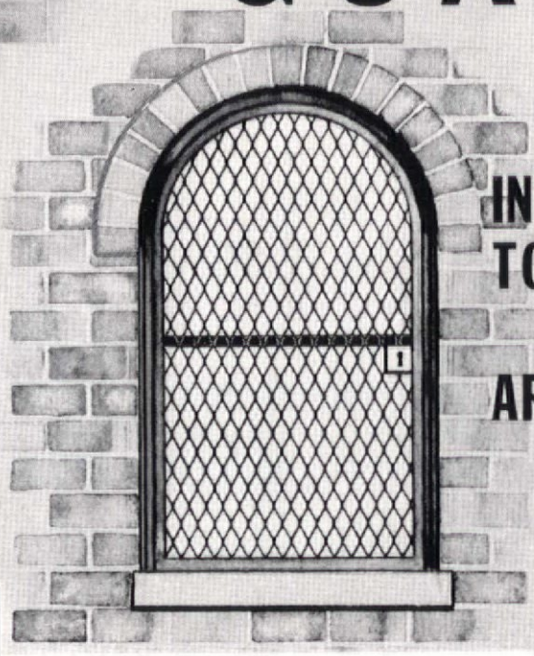
WINDOW GUARDS

NEW TOP-HINGED CURVED STYLE

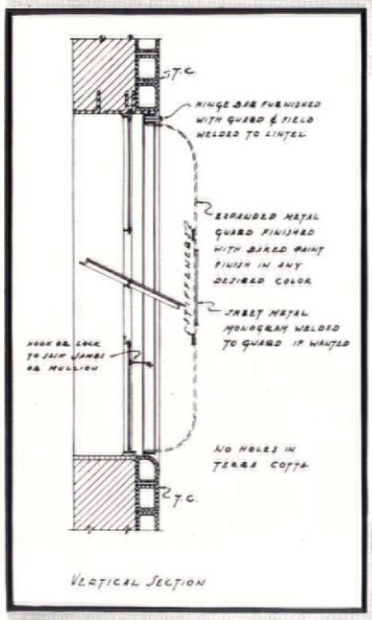
The guard has hinge bar at top which can be tack-welded to the steel lintel over window. See detail drawing below.

NEW SIDE-HINGED ARCH TOP STYLE

For use on arched windows. Jamb bars are anchored to masonry.



IN NEW DESIGNS TO HARMONIZE WITH YOUR ARCHITECTURAL PLAN



Inconspicuous window guards, designed and finished in baked enamel paint in a color to harmonize with the architectural treatment of any modern office building, apartment house, industrial plant or other type of structure are now available made from Steelcrete Expanded Metal. Each guard consists of a section of expanded metal and frame, with hinges or other fixture for fastening to the building. A wide selection of meshes permits choosing a type of guard for protection against glass breakage, illegal entry or exit or damage due to thrown objects.

"It's Wheeling Steel"

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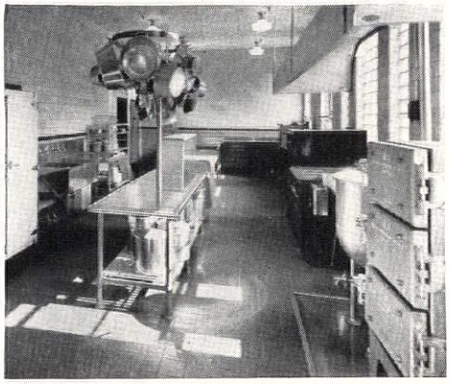

• • Planning the National Defense

When architects are called upon to plan new buildings for the production of essentials for the national defense program they realize that one of the most vital departments is that of

FOOD SERVICE

for INDUSTRIAL WORKERS

Because of long experience in this highly specialized field our engineers are uniquely qualified to assist architects and industrial executives in planning and equipping plant restaurants in a manner that assures the same efficiency as that of the production line. We list only a few representative plants in which John Van kitchen equipment is rendering "heavy duty" service.

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The services of our engineers are available without charge or obligation to architects having food service problems on their boards.

The John Van Range Co.
EQUIPMENT FOR THE PREPARATION AND SERVING OF FOOD

Branches in Principal Cities
328 EGGLESTON AVE., CINCINNATI, O.

HEADWAY & HEADACHES

(Continued from page 82)

► This estimate was far too low. For lack of funds during past years and for lack of time last fall, the Army was forced to base its estimates on the cost-per-man of building several small camps during 1939 and early 1940. More accurate estimates would have required preliminary site surveys, utility layouts and building plans. As it was, many sites had not yet been selected, for the Army's much-touted M-day plans were based upon the supposition that the need would be for several large short-term basic training camps to prepare soldiers for embarkation to foreign training and battlefields as in World War I. Not until last summer did an aroused public opinion indicate that the Army would have to junk these plans, prepare for the long-term training of troops whose number this summer will reach the statutory maximum of 1.4 million.

► Material cost rises played a comparatively small part in the program over-run. Reports from local project architects, engineers and contractors show that framing lumber prices were the biggest bugaboo, advancing an average of 29 per cent between July 1 and the time of purchase at 35 projects. Sheeting came next, up 27 per cent. Other trouble-makers: millwork, up 13 per cent; electrical material, up 11 per cent; plumbing material, up 6 per cent.

► Another comparatively small factor behind the general cost boost was the change of construction plans (upon which the original estimates were based) to bring them in line with the most recent military developments. Size of 63-man barracks was enlarged; roofing materials were changed from black to mineral-coated red; wood post foundations gave way to concrete posts; termite shields were specified at the last minute; and the painting of all buildings was not decided upon until after the program got under way. Finally, organizational changes in the Army based upon European lessons increased its mechanization and required wider roads than originally contemplated, wider dispersal of buildings and more buildings for the storage and repair of equipment.

► Much more important cost-wise was the increase in quantity, size and degree of development of utilities. Due to the lack of adequate site surveys many unfortunate topographical and sub-soil conditions were encountered and with complete surprise—rock formations, running sand, swamps, deep ravines, etc. Moreover, the utility systems had to be varied considerably from those serving the 1939-40 camps on which the estimates were based. Thus, it was necessary to build 17 miles of railroad to serve one camp, a complete water system (dam, filtration and pumping plant, storage tanks, etc.) for another. At a third an

(Continued on page 86)

Compare

SPECIFICATIONS
Then You'll Know Why

Gar Wood

Gives Greatest Value and Best Performance

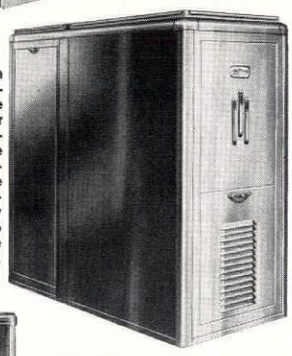
★ Today's highly satisfactory performance of Gar Wood home heating and air conditioning equipment is the result of accumulated engineering and practical field experience of many thousands of installations throughout the country, operating for more than a decade. Today, Gar Wood engineers bring laboratory efficiency into the home!

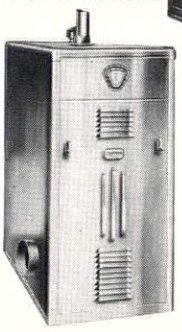
OIL-FIRED

The 1941 Tempered-Aire models are the latest editions of a long line of units distinguished for their phenominal fuel economy. Basically the design is identical to the original pioneer furnace-burner unit introduced by Gar Wood over a decade ago. This year a smaller model is available for lower cost homes.

GAS-FIRED

Nine models, both vertical and horizontal types, comprise the new 1941 Gar Wood line of gas-fired automatic home heating and air conditioning units. Three basic heating sections are used singly and in multiple to provide a complete range of capacities.





STEAM • HOT WATER

The 1941 Gar Wood Series "B" Boiler Units are of the internally fired, downdraft type. Combustion is completed within a fire bowl located at one end of the firebox. The hot combustion gases travel the length of the firebox, then reverse and re-travel the length of the boiler in the fire tubes. Offered in five capacities.

Write or Ask for Literature

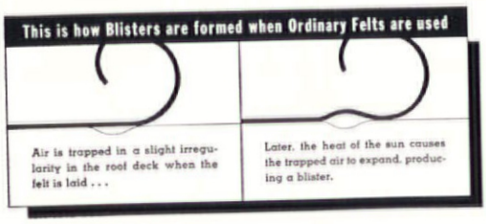
Bulletins illustrating and describing Gar Wood units furnished on request.

AIR CONDITIONING DIVISION
GAR WOOD INDUSTRIES, INC.
DETROIT, MICHIGAN, U.S.A. • *Canadian Distributors: Engineering Industries, Ltd., Toronto, Ont.*

J-M's 15-LB. *Perforated* ASBESTOS FELT

Today's newest roofing development... increases the efficiency of smooth-surfaced roofs . . . minimizes "Blistering" hazards!

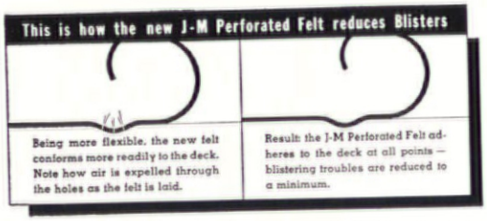
This is how Blisters are formed when Ordinary Felts are used



Air is trapped in a slight irregularity in the roof deck when the felt is laid . . .

Later, the heat of the sun causes the trapped air to expand, producing a blister.

This is how the new J-M Perforated Felt reduces Blisters



Being more flexible, the new felt conforms more readily to the deck. Note how air is expelled through the holes as the felt is laid.

Result: the J-M Perforated Felt adheres to the deck at all points — blistering troubles are reduced to a minimum.

LONG FAMOUS for fire-, weather-, wear-resistant built-up roofs, J-M now offers a new-type felt! It's the *Perforated Asbestos Felt* . . . and it increases roof service by reducing blistering hazards to a minimum.

As every architect knows, when laying conventional felts, "air pockets" are often formed. As the sun's heat causes the trapped air to expand, blisters result. The J-M Perforated Asbestos Felt is provided with millions of tiny perforations—"check valves" that open upward to allow trapped air to escape during application, but are completely sealed by the waterproofing asphalt when the roof is laid. Result: The Perforated Felt adheres closely to the roof deck . . . blistering troubles are minimized.

Specify this protection for all your clients. They'll appreciate the continued trouble-free roofing service J-M Perforated Asbestos Felts provide. For full details and specification data, write Johns-Manville, 22 East 40th Street, New York, N. Y.

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***Smooth-Surfaced* ASBESTOS BUILT-UP ROOFS**

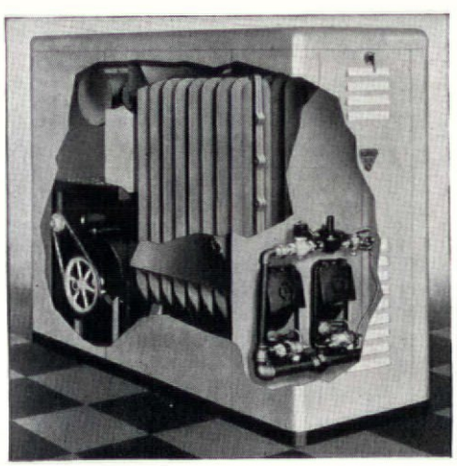
THE ROOF WITH THE SAFETY FACTOR

RYBOLT

Even the Low Cost Home can have Automatic Heating

• Modern automatic winter air conditioners are now so reasonable in price and so simple to install that they are well within the limits of the low cost home budget. Besides, through the FHA or on dealers' deferred payment plans such equipment can be bought on remarkably easy terms.

RYBOLT automatic heating units are available in a wide range of designs in cast iron or steel, with coal, gas or oil as choice of fuel. Their efficiency and convenience are matched by their low operating cost. For homes in still lower price brackets RYBOLT gravity furnaces, fired by coal, gas or oil, will give dependable and economical heating performance.



RYBOLT CAST IRON GAS-FIRED

Winter Air Conditioner... Series CG

Completely new in design this RYBOLT cast iron gas-fired Winter Air Conditioner has many modern features which contribute high efficiency. Combustion chamber of durable gray iron castings of uniform thickness. Special flue economizer and scientific baffling promote economy of operation. Cabinet of smooth gray Hammerloid finish is inner-lined with a sheet metal baffle. Sturdy, simple and accessible to service. Compact neat design. 5 sizes.

Write for "The Complete Line" Folder

THE RYBOLT HEATER CO.
617 MILLER ST. • ASHLAND, OHIO

HEADWAY & HEADACHES

(Continued from page 84)

elaborate sewage disposal plant was needed to save the fish in a near-by stream.

► Labor costs comprised another unexpectedly big item. Reasons: the demand for speed and its attendant over-time, shift work and rapid expansion of labor forces. In the drive to get a project started, men were hired in droves and to keep it going were only fired for particularly serious inefficiency. Due to shortages of skilled mechanics, many unskilled men were assigned to higher jobs at the higher rates of pay, despite the fact that they were expensively inefficient. Moreover, the supervisory forces of contractors were too small, somewhat rusty with activity and, due to the widespread demand for supervisors, were difficult to expand in line with the sizes of the projects. And, of course, labor wages went up in many localities.

► Weather was another important cost-raising factor. When the original estimates were prepared, it was expected that construction would start in late summer. Instead, fall was the starting period, and cold winter weather and frozen ground upped costs in the north while torrential rains hampered progress in the South and California.

After hearing and studying Col. Somervell's testimony, Chairman Edward T. Taylor of the House Committee on Appropriations concluded: "Looking at the vast undertaking in the light of its magnitude of $1 billion of construction on more than 186 different projects in varied sections of the country, and to be completed in a very short time under all conditions of weather and topography, there is reason to praise the Army authorities for their accomplishments. It is easy to criticize and find fault, but fairness compels a bestowal of commendation for sincere, determined effort to do the best possible kind of a construction job under the worst possible conditions both as to expedition and cost."

Additional construction. Five big items account for most of the $236 million sought and received by the War Department for constructing projects not contemplated in the original program: 1) Chapels, $12.8 million — the Army apparently forgot about the religious life of its selectees or judged that recreation rooms and pianos would serve the purpose. But, its 1,250 new chaplains said "no", hence will get 604 new chapels and organs at about $21,220 a pair. 2) Reception and discharge centers, $20.7 million—another slip of mind accounts, perhaps, for the failure of Army estimators to include in their original totals the cost of buildings to care for the exodus of one-year trainees. Since reception centers will be continually used for the examination and outfitting of replacements, they cannot be used in reverse without confusion. 3) Recreational facilities, $17.0 million—principally outdoor athletic fields and equipment, officers' day rooms and mess halls and Red Cross recreation buildings for cantonment hospitals. 4) Access roads to training areas, $12.9 million—connecting links between camps and target ranges, drill grounds, manoeuver areas, etc.—20 and 30 ft. second class roads at about $15,000 per mile plus some WPA labor. 5) Air corps, $125 million—principally airfield grading, paving, lighting, etc., housing and depots for plane maintenance in connection with the expanded Air Force program.

Engineering surveys. Most significant item in the Army's entire $695 million appropriation was the $15 million covering the cost of engineering surveys on which the next cantonment construction program will be based. Since the allocation is $15 million and since engineering costs are figured at about 1½ per cent of a project's total cost, the appropriation is a very definite indication of what the War Department is expecting—another $1.5 billion cantonment construction program to provide accommodations for an army of twice the presently authorized size.

To be completed by mid-summer, the surveys will help the War Department in the future avoid the cost-upping mistakes of the past, will save an officially estimated two months and $100 million over the program now nearing completion. Said Col. Somervell last month in retrospect: "It would have been better, as I see it now, if we had ignored our desire to locate the 44th Division at Camp Dix (the only National Guard divisional camp in the heavy winter weather area—New Jersey) in the Northeast at an early date, and to have devoted the entire (cost) . . . to engineering surveys and basic utilities" for the program as a whole.

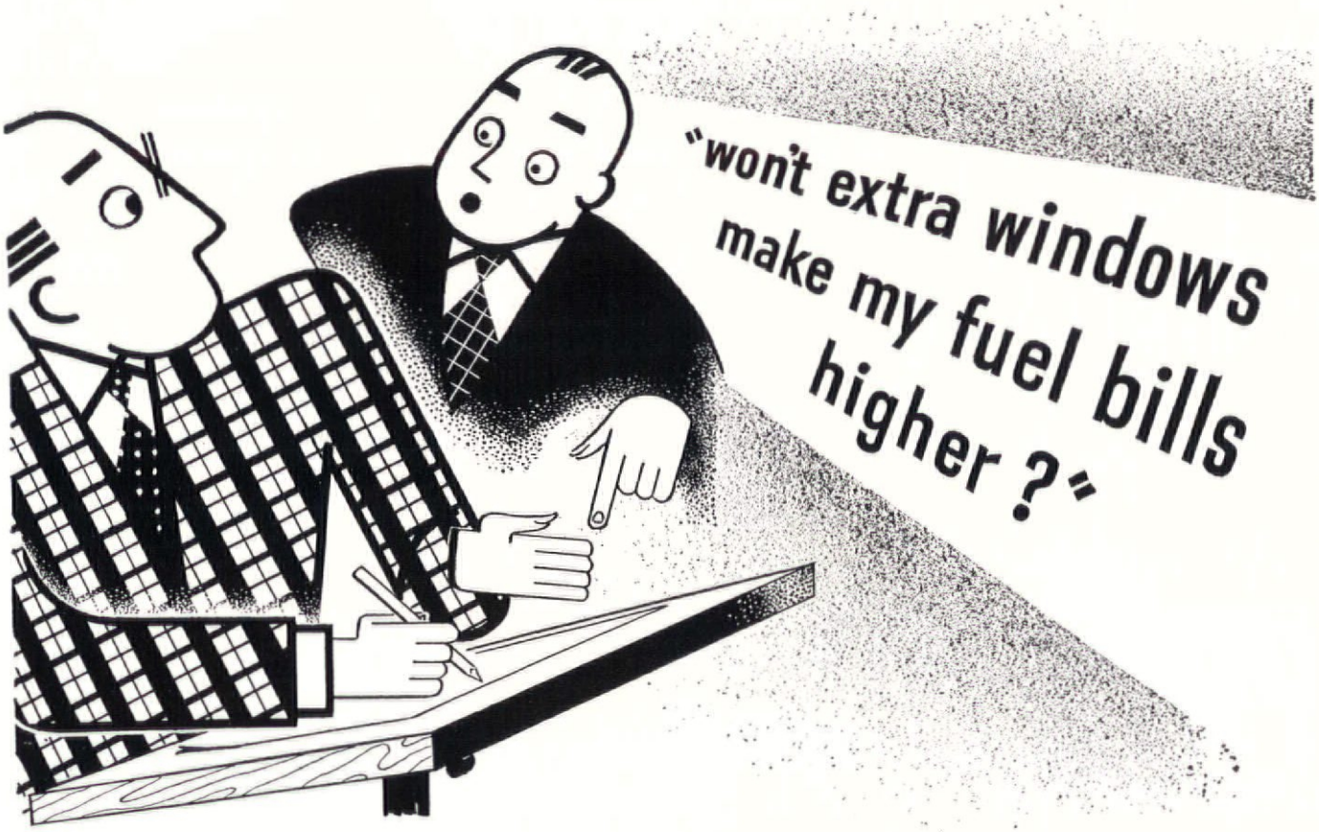
ARP

Ostensibly at peace, the U. S. is nevertheless considering the prospect of its being bombed by a foreign enemy. Thus, last month air raid precaution activities made headlines in four different communities.

► At Buck's Rock, Conn. the Children's Foundation Inc. last month opened an "evacuation center" to serve as an experiment in the care of school children who might be forced to leave New York City in case of war. A modern dormitory project of four two-story flat-roofed frame buildings (from the drafting boards of Designers Richard Bennett, Reinhard Bischoff and Donald Deskey), the center sleeps 125 children and fifteen supervisors in double-decker bunks. To put the experiment to test, 100 girls from New York's Dalton Schools have packed up their books and personal belongings, have been "evacuated" to the new center for a month's "protection." As in war time, their morale will be maintained by the planned absence of bombproof shelters. (It might have

(Continued on page 90)

HOW TO ANSWER THE CLIENT WHO *SAYS:*



● Your answer is easy! You simply say—"No! Not if we use Silentite 'insulated' windows!"

Using Silentite is the way to give homes plenty of light and air without making owners pay a penalty in excessive fuel bills and cold, drafty rooms. For Silentite makes possible the beauty and charm of greater glass areas without extra fuel cost. Its narrow mullions and Mitertite trim add to room beauty.

Curtis Silentite has a patented built-in weather-stripping that keeps heat in. It makes windows weathertight—yet they work easily in all kinds of weather. Owners say Silentite keeps their drapes, walls and rugs cleaner because dust and dirt don't sift in.

Silentite has eliminated another window "headache"—it won't jam, stick or rattle! Its sash glides smoothly in metal channels; its lifetime springs replace weights, pulleys and cords. It's a *trouble-free* window for all types of homes!

Silentite is "pre-fit"—it cuts installation costs, with Curtis Mitertite trim, as much as ⅔! Curtis has developed a handy "Calculator" to help you figure fuel savings with all types of wood windows, storm sash savings and window installation costs. Want one? It's free.

Curtis makes a complete line of architectural woodwork. The same high quality and lasting economy found in Silentite is true of all Curtis Woodwork, which has satisfied America's home builders for 75 years.

May we tell you all about our Silentite *wood* window family: double-hung, casement, circle window, and basement sash? Mail the coupon at once. If you live in Canada, write to W. C. Edwards & Co., Limited, 991 Somerset Street, West, Ottawa, Canada.

CURTIS WOODWORK IS SOLD BY RELIABLE DEALERS EVERYWHERE

When in New York, visit the Curtis Woodwork display at Architects' Samples Corporation, 101 Park Avenue.

OUR 75th YEAR

1866 CURTIS WOODWORK

SILENTITE PRE-FIT the "*Insulated*" window

THERE'S ONLY ONE SILENTITE AND ONLY CURTIS MAKES IT
Its patented features aren't available in any other window

CURTIS COMPANIES SERVICE BUREAU
Dept. AF-4, Clinton, Iowa

Send me a Silentite Economy "Calculator" and tell me more about these modern windows.

Name .....

Address .....

City ..... *State* .....

All those windows in a modern home were put there for a purpose . . .

LET Sunchek FABRIC VENETIAN BLINDS *preserve their function!*

YOU DO THIS WHEN THE BLINDS GET SOILED . . .

It's just as easy, and just as effective as washing curtains to tub SUNCHEK blinds in Lux or Ivory suds. They look like new.

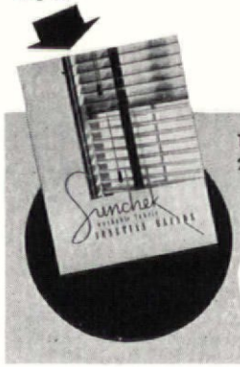
SMARTEN UP THE KITCHEN WITH THIS COLORFUL, PATTERNED BLIND . . . .

Miniature pots, pans and fruits handblocked in combinations of red, green or blue and black on a snowy white background. It'll "do things" for the kitchen.

YOU GET 4-WAY LIGHT AND VENTILATION CONTROL WITH THE PATENTED SUN - E - CLIPSE ADJUSTER.

You'll hear nothing but praise from the thousands of women who have SUNCHEK venetian blinds in their homes. They bought SUNCHEKS first because they admired their distinctive beauty . . . because they liked the cheerful, "toned" sunlight that filtered through the translucent fabric slats. Now, after those blinds have been in service for many months, they are discovering many plus values that hadn't even entered into their first consideration, such as — the ease with which SUNCHEKS may be cleaned . . . their four way control of light and ventilation . . . their noiseless operation . . . their inconspicuous bulk when "stacked" . . . and the surprising way those processed fabric slats resist every sign of wear. We have yet to see any venetian blind that has gained so many staunch, enthusiastic friends, in such a short space of time as SUNCHEK. You'll like them, too.

A copy of this booklet is yours for the asking. You'll enjoy reading it.



THE WESTERN SHADE CLOTH CO.
22nd and Jefferson Sts., Chicago, Ill.

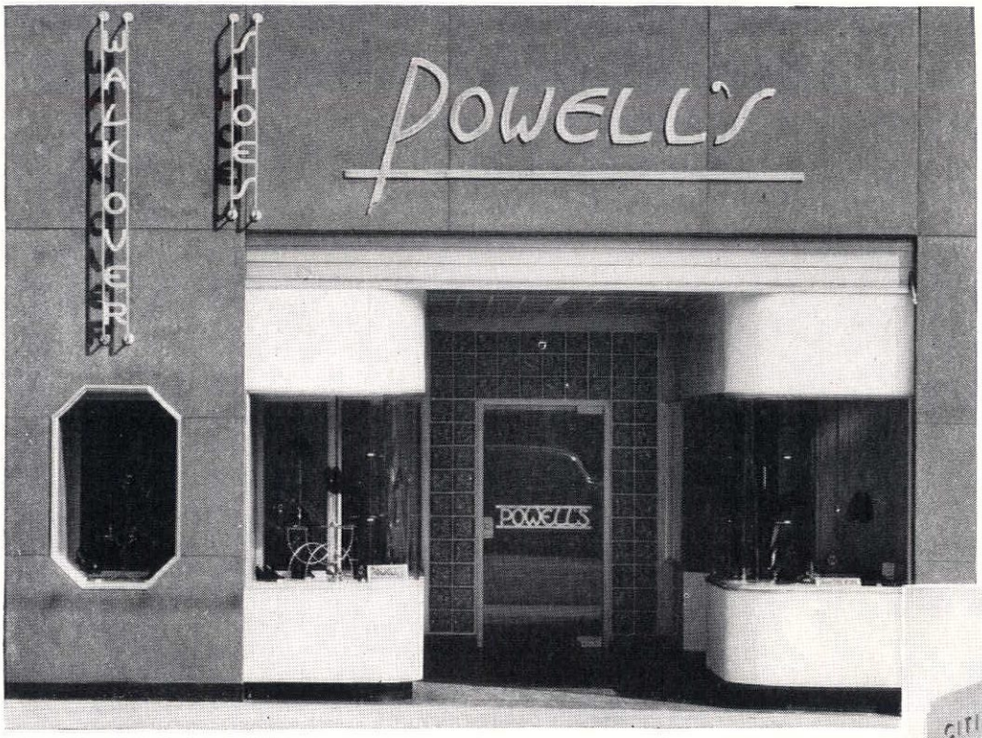
WILLIAM VOLKER & CO.
Main and 2nd Sts., Kansas City, Mo.

Name .....

Address .....

City ..... *State* .....

The Facing Itself Is Reinforced Concrete



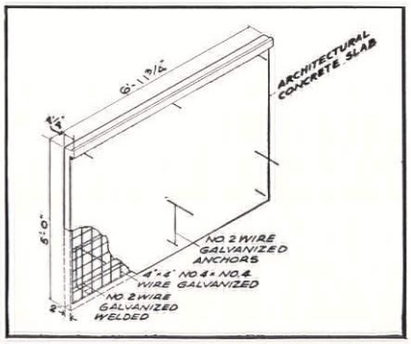
MODERNIZATION—Architectural Concrete Slabs used for remodeling Powell's Shoe Store, Greensboro, N. C. The slabs are of translucent quartz aggregate exposed in a dark green matrix made with Atlas White cement. The name, cast in the slab, is in 3/8" raised gold letters. Architect, C. C. Hartman: Slab Manufacturer, Arnold Stone Co., —both of Greensboro.

NEW CONSTRUCTION—Architectural Concrete Slabs lend dignity and prestige to the Citizens Bank, Conover, N. C. Base course, entrance jambs, and lintel are green granite slabs made with Atlas Lumnite cement. Balance is of Architectural Concrete Slabs made with light buff aggregates exposed in a matrix of Atlas White cement. Architect: Robert L. Clemmer, Hickory, N. C.; Contractor: Herman Sipe Co., Conover, N. C.; Slab Manufacturer: Arnold Stone Co., Greensboro, N. C.

Thin, precast Architectural Concrete Slabs, for new work and remodeling, combine strength of concrete and steel with permanent, colorful beauty of exposed aggregates

What are Architectural Concrete Slabs

Factory-made units, carefully following the architect's design, ranging up to and exceeding 100 sq. ft. in area, 20 ft. or more in length and usually 2" thick. High structural strength (7500 lb. per sq. in. or more) is due to factory fabrication, scientific proportioning, low water-cement ratio, vibration, heavy galvanized welded reinforcing, and careful curing. Textures and permanent colors are the result of exposing selected aggregates—quartz, marble, granite, ceramics, or vitreous enamels—in a matrix of Atlas White cement.



Advantages in New Construction

With Architectural Concrete Slabs the architect may secure economically the color and texture desired, increase the scale and character of the design, and provide the dignity and permanence of large scale units. Their large sizes and varied shapes reduce the number of joints and flashings. Their thinness, light weight, and large size make erection easy and economical.

Advantages in Remodeling

Slabs, quickly and economically anchored in place to old masonry walls, improve property appearance and values. Their relative thinness (usually 2") often permits use without ripping off the front of old building to keep within the building line.

ARCHITECTURAL CONCRETE SLABS—like this spandrel—may be of any size and shape desired. Reinforcing mesh gives the slab structural strength. Note anchor clips welded to the embedded mesh and used for handling and for anchoring the slab during installation.

▶ Write for more information on this modern material for new or old buildings. Universal Atlas Cement Co. (United States Steel Corp. Subsidiary), Chrysler Bldg., N. Y. C. Offices: New York, Chicago, Philadelphia, Boston, Albany, Pittsburgh, Cleveland, Minneapolis, Duluth, St. Louis, Kansas City, Des Moines, Birmingham, Waco.

AF-ACS-30

ARCHITECTURAL CONCRETE SLABS

MADE WITH ATLAS WHITE CEMENT

ATLAS WHITE

HEADWAY & HEADACHES

(Continued from page 86)

been better maintained had not the women sponsors of the project ordered many of the site's camouflaging trees to be cut down—see photograph, right.) At mid-month, Miss Helen Parkhurst, head of the Dalton Schools and one of the Foundation's mainstays, announced on page one of the New York *Herald Tribune* that the "evacuation" experiment was going "extraordinary well" and that her girls "are having a grand time."

► Meanwhile the Associated Press told New Yorkers who are less fortunate than the evacuated school girls that they might find air raid protection in the 40,000 underground vaults which honeycomb Manhattan Island. It seems that the early Dutch settlers dug the vaults for burial and other purposes, and their usefulness was not rediscovered until 1933 when the City decided to add to its revenues by requiring their owners to pay a license fee for the "excavations." Forthwith, WPAsters were ordered to chart the caverns, and, based upon their findings, the City sent out bills totaling $450,000. (To avoid the fee, many property owners have since filled in the vaults.) About 20,000 potential air raid shelters have been discovered and mapped—some of them extending under city streets, some of them 60 ft. deep, all of them averaging 6 ft. deep—and hunch is that there are at least 20,000 more yet to be uncovered by the continuing search. At February's end Borough Works Commissioner Walter D. Binger announced that he would study the air defense aspects of the strange WPA project.

Acme

Buck's Rock "evacuation center"

► Detroit's ready-made "bombproof"—big enough to accommodate the city's entire population of 1.6 million—is a 20-mile-long salt mine hidden 1,100 ft. below the automobile center's streets. Scale of the hole is indicated by the fact that trucks move along its corridors, 40-ton power shovels eat at its walls and a bewildered miner once made a wrong turn and was lost for thirteen days. But, before the 37-year-old mine (the country's second largest) can serve ARP purposes, one tough problem must be solved—although International Salt Co. is able to lift from 1,200 to 1,800 tons of salt per day through the mine's two access shafts, the elevators would have difficulty taking more than 100 persons per day to the refuge.

► Apparently besieged by requests for ARP data, the War Department month ago publicly announced that it had no printed material to offer, suggested that inquirers peruse scientific English and Canadian documents many of which are available for reference in the British Library of Information in New York City (ARCH. FORUM, Nov. 1940, bibliography, p. 15).

"OK" INSTEAD OF "Giddap"!

THE MONEY YOU SAVE WITH THESE MODERN FORM TYING METHODS—"AIN'T HAY"!

RICHMOND 10-WAY PROFIT PLAN

1—Over 58 different form tying devices to choose from.
2—Always cost less to use than wire, band or rod ties.
3—Engineered for safe working loads of 1500 to 25000 lbs.
4—Faster erecting and stripping plus big lumber savings.
5—Promotes perfect alignment for correct wall thickness.
6—Protects job against rust staining with "1 to 2" "hold-back."
7—Scientifically reduced weight, saves shipping and handling costs.
8—Only known prevention against termite destruction.
9—You borrow working parts paying only for ties in the job.
10—Free estimating service specifying job quantities needed.

No question about it, your horse-drawn dirt-cart moved a lot of stuff in it's day. Yes, and a lot of concrete form work is still being done today in a way that's just as old fashioned and costly. How about yourself? Bet you we can show you a couple of money-making angles you've missed.

Every time you even think about a concrete job without thinking of Richmond, you're letting a lot of dollars slip through your fingers. Take a tip from thousands of contractors and rely on Richmond. What's it get you? Look at our 10-way profit plan! You're bound to profit. Big, too!

FREE ESTIMATING SERVICE

By 15 especially experienced engineers to tell you exactly how many ties are needed, what kind, how to do the job fast for extra profit. Plus 9 other "profit-savers" features in our 10-way profit plan.

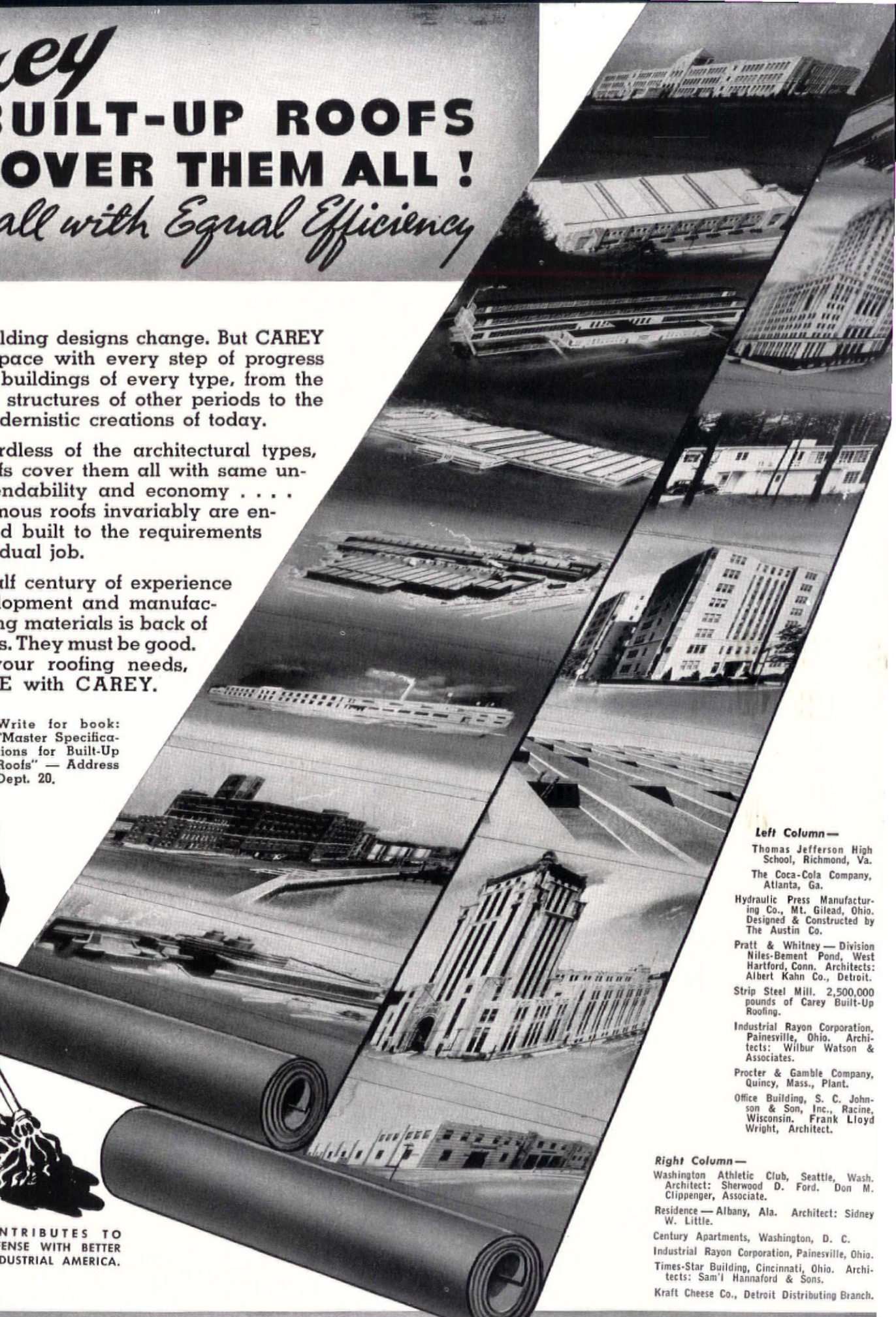
For complete product information see our pages in Sweets Catalog Engineering & Contractors and Architectural Sections or write direct to Dept. D

RICHMOND SCREW ANCHOR COMPANY, INC.
816 LIBERTY AVENUE • BROOKLYN, NEW YORK

TIME AND LABOR SAVING CONSTRUCTION DEVICES FOR CONCRETE CONSTRUCTION

Carey BUILT-UP ROOFS COVER THEM ALL!

Serve all with Equal Efficiency



Building designs change. But CAREY Roofs keep pace with every step of progress . . . . cover buildings of every type, from the time-scarred structures of other periods to the massive, modernistic creations of today.

And regardless of the architectural types, CAREY Roofs cover them all with same unfailing dependability and economy . . . . for these famous roofs invariably are engineered and built to the requirements of the individual job.

Over a half century of experience in the development and manufacture of roofing materials is back of CAREY Roofs. They must be good. Whatever your roofing needs, you're SAFE with CAREY.

Write for book: "Master Specifications for Built-Up Roofs" — Address Dept. 20.

CAREY CONTRIBUTES TO NATIONAL DEFENSE WITH BETTER ROOFS FOR INDUSTRIAL AMERICA.

Left Column—

Thomas Jefferson High School, Richmond, Va.

The Coca-Cola Company, Atlanta, Ga.

Hydraulic Press Manufacturing Co., Mt. Gilead, Ohio. Designed & Constructed by The Austin Co.

Pratt & Whitney — Division Niles-Bement Pond, West Hartford, Conn. Architects: Albert Kahn Co., Detroit.

Strip Steel Mill. 2,500,000 pounds of Carey Built-Up Roofing.

Industrial Rayon Corporation, Painesville, Ohio. Architects: Wilbur Watson & Associates.

Procter & Gamble Company, Quincy, Mass., Plant.

Office Building, S. C. Johnson & Son, Inc., Racine, Wisconsin. Frank Lloyd Wright, Architect.

Right Column—

Washington Athletic Club, Seattle, Wash. Architect: Sherwood D. Ford. Don M. Clippenger, Associate.

Residence — Albany, Ala. Architect: Sidney W. Little.

Century Apartments, Washington, D. C.

Industrial Rayon Corporation, Painesville, Ohio.

Times-Star Building, Cincinnati, Ohio. Architects: Sam'l Hannaford & Sons.

Kraft Cheese Co., Detroit Distributing Branch.

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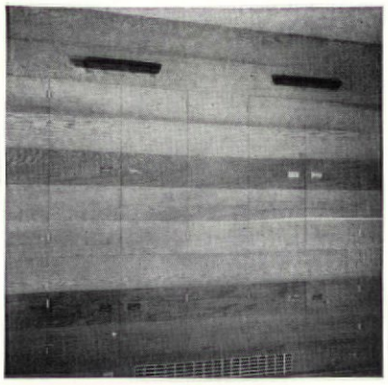
Whatever the job . . .

Consider Redwood

Testing laboratories, architects, engineers and builders rate Redwood at or near the top in this combination of 8 essential points:



Stay-put Qualities: Forest Products Laboratory lists Redwood as having lowest volumetric shrinkage of U. S. commercial woods. Certified Dry Grades assure correct dryness for your locality.

Durability: Among the most durable of all woods. Classed as "durable even when used under conditions that favor decay".

Easy Workability: Even textured grain permits smooth milling and sawing, takes nails and screws close to edge, making neat, tight joints easy.

Architectural Adaptability: No material can take a greater variety of surface finishes. No lumber offers a greater number of siding patterns.

Beauty: Its mellow "sunshine" tones reflect the beauty of captured sunlight. Beautiful grain patterns . . . a wood you can live with.

★ ★ ★ ★

Paintability: Forest Products Laboratory classes Redwood among those woods which "hold paint longest . . . ". Experiments show up to forty per cent saving on paint maintenance.

Economy in Use: High resistance to decay, weather, shrinkage assures long life. Lenders carrying long mortgages often insist upon Redwood specifications.

Insulation Value: One inch of Redwood equals eight inches of non-cellular materials in preventing heat loss. University of Minnesota tests place Redwood among the woods highest in insulating value.

Redwood is the ideal wood for:

Siding	Structural Timbers	Gutters
Interior and Exterior Trim	Mud Sills	Mouldings
	Window Sills	Paneling
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Underpinning	Log Cabin Siding	Shakes

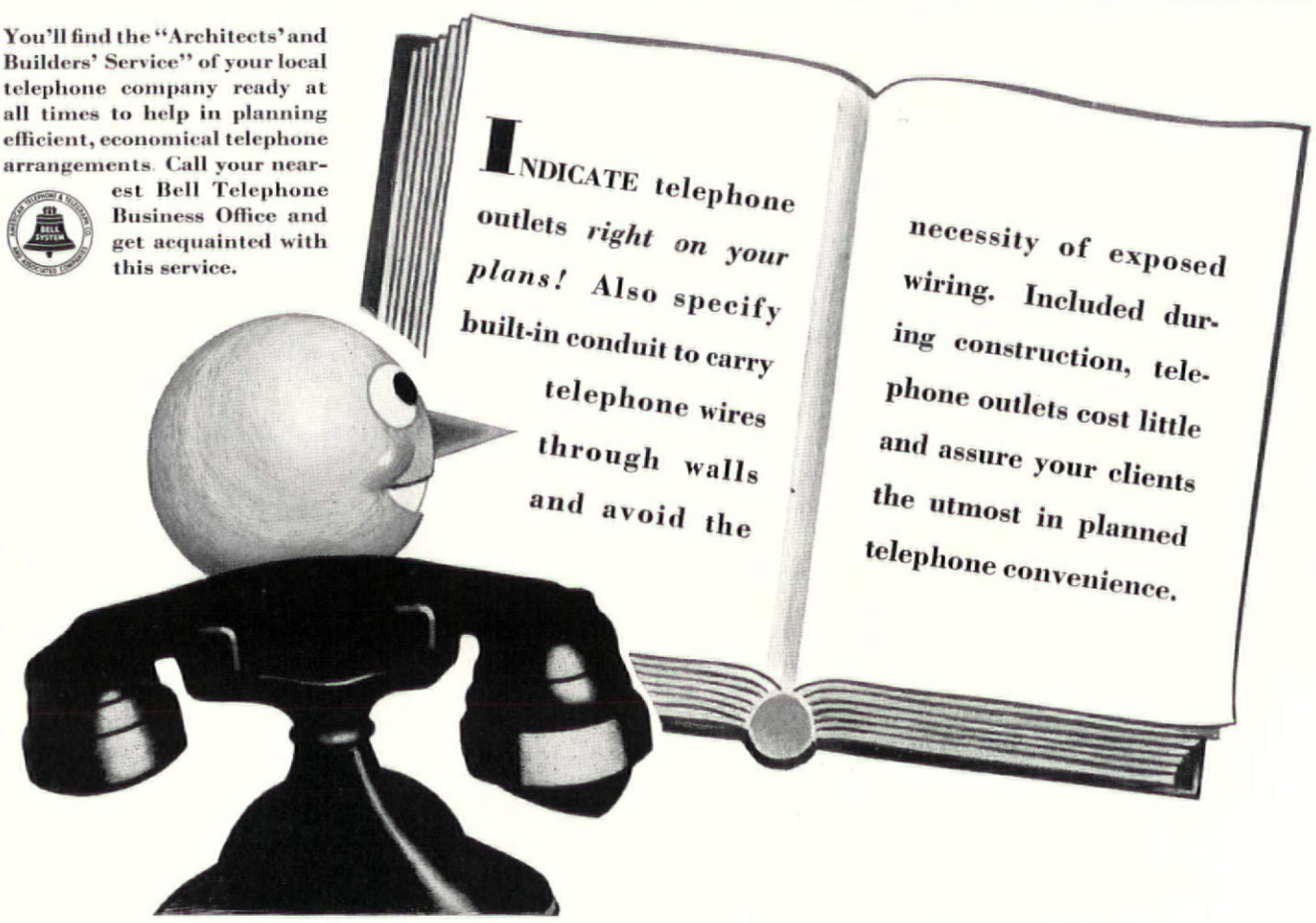
Standard patterns of above Redwood products are available at most distribution points. If you can't obtain Redwood easily please write, we will tell you how to get it. Send for architectural data on Redwood.

California Redwood Association, San Francisco
Also offices in New York City, Los Angeles

Illustrations above show natural finish china cupboard of Redwood in home designed by John Funk, Architect.

★ ★ ★ ★

You'll find the "Architects' and Builders' Service" of your local telephone company ready at all times to help in planning efficient, economical telephone arrangements. Call your nearest Bell Telephone Business Office and get acquainted with this service.



Restyling with Paint

To Meet The Nation-wide Color-styling Trend, Architects Are Specifying Proper Modern Color Combinations — In Pittsburgh Paints

TODAY, alert architects throughout the country are realizing more than ever before the unlimited possibilities of "Restyling with Paint." For they know that properly chosen colors can make a small house appear more spacious; a large, cold home look more comfortable, more inviting; can cause long, narrow rooms to seem wider, dark rooms to seem brighter. They know, in short, the importance of color-styling.

They know, too, the economy of specifying top-quality finishes with colors *always* uniform . . . with viscosity, spreading, hiding, *always* the same. That is why so many of these architects are specifying Pittsburgh Paints.

"Style Right" Finishes

The Pittsburgh Plate Glass Company has been manufacturing fine paints more than 82 years. Through exact scientific control, rigid testing, constant checking and rechecking, a complete line of quick-drying, long-lasting finishes has been developed which enable the architect to accomplish *any* desired effect with a minimum of time, labor and cost.

So, in specifying paint, say "Pittsburgh Paint" and be *sure* of lasting satisfaction. Your clients will appreciate the recommendation of these nationally advertised, internationally known finishes.

See Sweet's Catalog

Look for the Pittsburgh section in Sweet's Catalog. Here you will find a complete list of all the Pittsburgh Branches. Ask for a representative to call. He may be able to help you with difficult or unusual conditions. Pittsburgh Plate Glass Company, Paint Division, Pittsburgh, Penna.

Copr. 1941 Pittsburgh Plate Glass Co.

PITTSBURGH PAINTS

WALLHIDE • FLORHIDE • WATERSPAR • SUN-PROOF

Smooth as Glass

PILOT TRAINING CENTER

(Continued from page 16)

deemed necessary. Construction was begun immediately on additional facilities. At year's turn incoming classes were increased to 120 cadets arriving every five weeks and staying for ten weeks of training.

As it now stands, neatly crystallizing a plan pattern that anticipates still other short-notice expansion demands, the Hemet training base comprises:

► Three hangars, each 100 x 150 ft., with lean-to additions housing the flight instructors' lounge, cadet locker rooms and showers, parachute storage and loft, stockrooms, shops, plus an office for the flight dispatcher and flight clerk. Hangar construction: wood trusses, composition roofs, sheet metal siding, 4 in. concrete floors.

► An administration quadrangle, open at one end, with two office buildings (one for Ryan bigshots, the other for Army brasshats), an Army medical unit, two classrooms and six laboratories arrayed along the other three sides. Construction: California redwood siding, oak floors.

► A kitchen, mess hall, cadet lounge and canteen—all compactly clustered in a single 50 x 180 ft. building. Equipped to serve 425 persons, the kitchen includes three ranges, bakers' oven, electric dishwasher, large refrigerators. Mess hall feeds 200 cadets at a sitting, and additional facilities are provided for an officers' mess and a public canteen. Measuring 42 x 70 ft., the cadet lounge boasts such comforts as a piano, radio, pingpong table, desks, reading lamps, and soft lounge chairs.

► Most interesting architecturally, a triangular grouping of 30 unit-type barracks. Each unit houses eight cadets, is divided into twin 4-man apartments. Thoroughly standardized, each section has its own bath, complete with tub, shower, toilet and lavatory. Two dressers, two study tables, two double bunks—all finished in traditional California Monterey style—comprise each apartment's furnishings, along with chairs and other necessary equipment. Ample closet space is provided for the cadets' personal clothing.

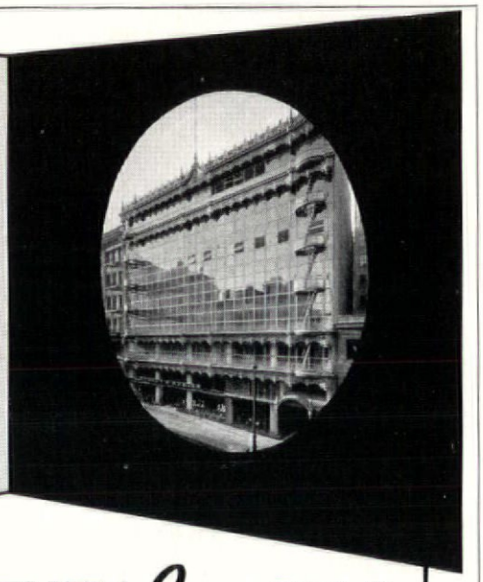
Hemet Valley's relatively hot summer air and low humidity make some sort of air conditioning imperative. So-called "desert coolers" are therefore installed in the offices, classrooms, mess hall and hangars. With these, the dry outside air is sucked through moist paddings, then distributed inside the buildings. Temperatures, it is reported, can be lowered as much as 20 degrees. For further atmospheric control all buildings have picturesquely wide roof overhangs, insulated walls and high ceilings.

The barracks units are not air conditioned, but with 722 cu. ft. of air rationed to each cadet and ample cross ventilation they are fully satisfactory. For chill days, each cadet apartment has its individually operated gas space heater. Each barracks unit also has its own hot water heater.

Anent utilities, water constituted the school's main problem. The first well dug proved insufficient, required a second 294 ft. deep. To provide an ample supply of butane gas for cooking and heating, a 4,000 gal. tank is on tap. Vaporizer and pressure regulators are operated at natural gas pressures so that all facilities may be easily converted if natural gas becomes available. The sewage problem was solved by installing four large septic tanks—one each in the hangar, administrative, mess hall and barracks areas.

Aside from its architectural virtues, the new Ryan school offers natural advantages which make it a favored feeder of fledgling pilots into the Air Corps' advanced training centers. High mountains bound an area of some 400 sq. mi. cut by small hillocks and ridges in just sufficient number to provide choppy air when needed for training students to handle planes in all kinds of weather. Hemet Valley's vast plateau also provides a convenient system of auxiliary landing fields. Boon, too, is fact that the Valley is free from heavy air line traffic. With all these assets stacking high in its favor, it would be scant wonder if Ryan gets orders to multiply itself still further to accommodate still more cadets.

in 1918 an Architectural Sensation



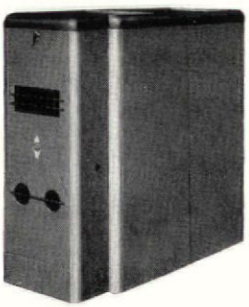
HALLIDIE BUILDING, *San Francisco* . . . The first all-glass (flush) front. Designed 23 years ago by the late Willis Polk. ☆ Named for the founder of San Francisco's cable lines.

...AND EVEN THEN *Payne* WAS A VETERAN IN GAS HEATING

Important to you is this fact: Year after year after year, PAYNE has concentrated on doing one thing superlatively well—the design and manufacture of *gas* heating equipment. ☆ When you specify PAYNEHEAT you back your own judgment with a reputation, a product, nationally accepted with absolute confidence. ☆ The reasons for this leadership will be instantly apparent when you check with your Gas Company or PAYNE Dealer. ☆ See Sweet's or Western States AEC Catalog. And write for our convenient AIA file.

FOR FURTHER INFORMATION SEE OUR CATALOG IN SWEET'S

Illustrated, the PAYNE Zoneair. *Also:* Forced Air Unit • Floor Furnace • Duplex furnace • Modern Console • Spacesaver Unit • Gravity Furnace.



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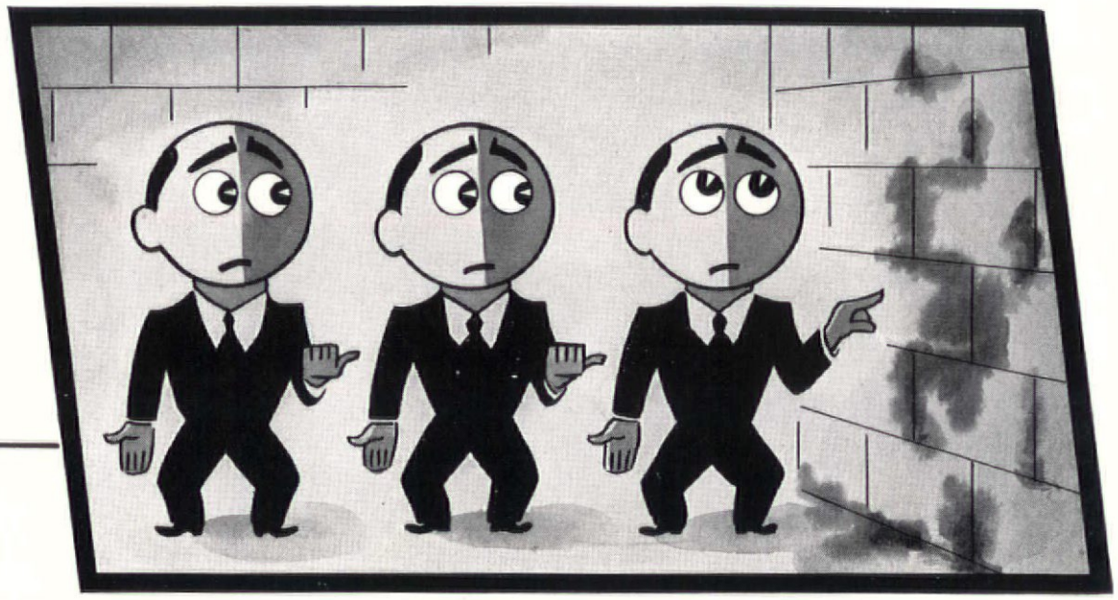

Who's to Blame
FOR DAMP BASEMENTS

ARCHITECTS? CONTRACTORS? SUB-CONTRACTORS? ACT OF PROVIDENCE?

● Whom shall we blame for so many damp basements? The architect who specifies an inefficient waterproofing material or fails to specify any? The general contractor or concrete contractor? Or is it providence? Let's don't blame anyone.

Our interest, and yours as an architect, is to prevent damp basements in the future, not to place the blame. It is quiet evident that oldtime specifications for basements are not enough. If they were, countless homes and business and industrial buildings wouldn't have damp basements today. Consequently our interest is in—

HOW TO PREVENT DAMP BASEMENTS. The specification of Medusa Waterproofing—Medusa Waterproofed Gray Portland Cement or if not available, Medusa Concentrated Waterproofing Paste or Waterproofing Powder—to be used in all concrete and mortar and as a plaster coat, prevents damp basements. These waterproofings line the pores of the concrete or mortar with a waterproofing material that repels all water at the surface. Medusa Waterproofed concrete and mortar are used like ordinary concrete and mortar and their cost is only slightly more than unwaterproofed materials. Owners are glad to pay this slight difference for the protection of permanently waterproofed basements and walls. Send the coupon below for a copy of the book, "How To Make Good Waterproofed Concrete."

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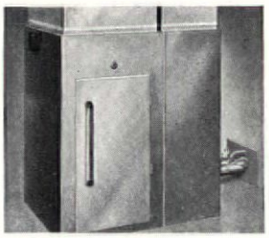
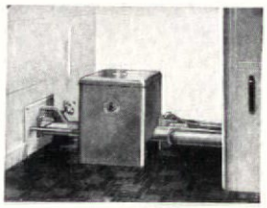
Save with Iron Fireman Modern Automatic Coal Heat . . .



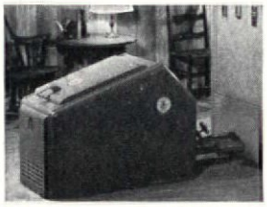
Complete AUTOMATIC Winter Airconditioner . . . $389.50*

Feeds coal from bin! Contains built-in Iron Fireman stoker; steel furnace; filters; humidifier; forced circulator.



Coal Flow $226* up

No coal handling. The famous Iron Fireman *Coal Flow* stoker "pipes" coal from enclosed bin.



Standard $179.50*

Adds only about $1.25 to $1.50 a month on average FHA terms!

You can give your clients "*more house*" when you build for *low operating cost.* For example, if you install equipment that cuts operating costs $5 a month, then the family can add this $5 to its FHA payments . . . and get an *extra $850 to pay for a* bigger, better-equipped house.

The biggest reduction in operating costs, in most areas, can be made by installing Iron Fireman automatic coal heating instead of burners using more costly fuels.

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The public is responding to architects who provide for low operating costs. National advertising is steadily increasing public acceptance. See the Iron Fireman advertisements in the *Saturday Evening Post, Better Homes & Gardens, American Home,* and other leading publications. Send for free copies of consumer folder, "How to Build or Buy a Home for Low Operating Costs." Use this folder in talking to clients.

*All prices include automatic controls. Plus freight and installation. All models available for both bituminous and anthracite firing. (Prices slightly higher in Canada).

IRON FIREMAN
Automatic Coal Stokers

FREE . . . Free Copies of Folder for Your Clients.

IRON FIREMAN MANUFACTURING CO. Portland, Ore.; Cleveland; Toronto.
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☐ Send me_____copies of "How to Build or Buy a Home for Low Operating Costs."—No obligation.

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WHEREVER toilet room traffic is heavy and usage severe, you're sure to find Whale-Bone-Ite Closet Seats. You will find they've been in service for years—five, ten, twenty, and more—and still look new! Don't be surprised when building managers say they haven't spent a penny for repairs of Whale-Bone-Ite Seats since installed. We have never heard of one wearing out!

COST NO MORE THAN OTHER HEAVY-DUTY SEATS

Any wonder Whale-Bone-Ite Seats are preferred for hotels, hospitals, schools—in all types of public and commercial buildings. They don't warp! They withstand severest abuse! They can be cleaned with strong disinfectants without harming their lustre.

EASY TO CLEAN—ALWAYS LOOK NEW

Molded of hard, resilient ebony plastic with a strong laminated wood core, Whale-Bone-Ite Seats have no surface coating to wear off. They're solid and smooth all over—moisture-proof—easy to clean, comfortable to use.

There is a suitable Whale-Bone-Ite Seat for every construction project on your boards. Refer to your Sweets Service for specifications—or, we will gladly send a complete catalog on request.

Brunswick

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623 South Wabash Avenue, Chicago, Illinois
MAKERS OF FINE CLOSET SEATS FOR EVERY INSTALLATION

IRON and STEEL
SHOULD BE
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IT IS EASY to write "Bonderized" into the specifications for steel building equipment, but rust is hard to explain away when the owner complains about it.

It is always more satisfactory to everyone concerned if Steel Windows, Air Conditioning Equipment, Radiator Covers, Bath Room Cabinets, and other steel units are Bonderized before finishing. Bonderizing holds the paint, and the effects of moisture and rust are defeated.

Bonderizing has been protecting America's finest products for many years. It is accepted by many industries as one of the most effective finishing methods. It saves refinishing costs and is a positive economy for the builder.

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PARKER *Processes* **CONQUER RUST**

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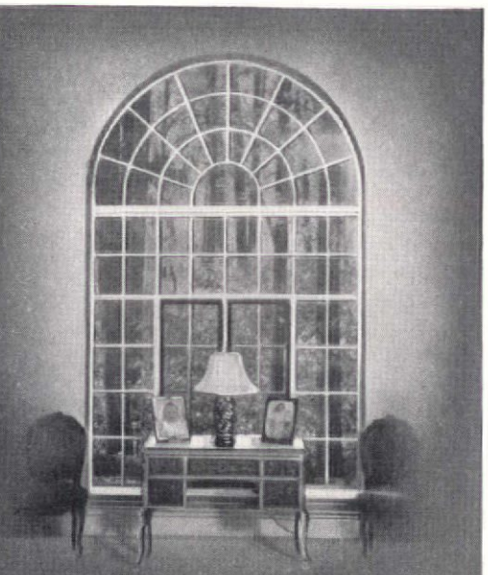
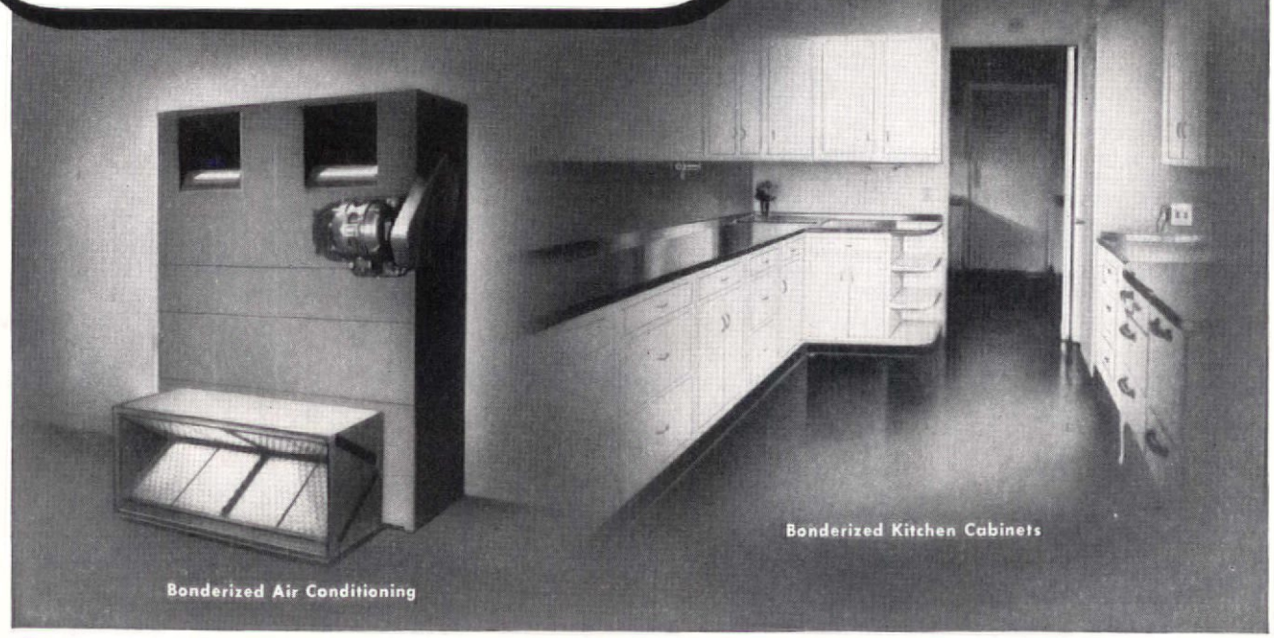
SEND FOR THIS BOOK: *It gives you the information you want about Parker Processes, and tells how they are serving the building industry by protecting iron and steel building materials from rust.*



Bonderized Steel Windows

Bonderized Radiator Cabinets



Bonderized Air Conditioning

Bonderized Kitchen Cabinets

HOUSING PROPOSALS

(Continued from page 18)

time to fight out that battle. Defense is in a hurry, and at best it will not get into full swing any too soon."

Those sentiments are admirable. But the Coordinator has not yet started to apply them.

Third Failure: Private enterprise is still unwilling to build defense housing.

In spite of all the coddling given it, and after seven months of talk about its "major role," private enterprise has proved a complete flop in providing defense housing, just as it did in 1917-18. The reason is the same—because there is too much risk involved. Which should have been just as obvious before the event. There is no mystery about it.

Asked for information as to the number of units of defense housing being built so far by private enterprise to compare with the number being built by Government agencies, which he publishes weekly, the Coordinator replied that "A large proportion of defense housing is of this emergency character and *therefore beyond the reach of private builders.* (italics ours). That is one of the main reasons we drafted Title VI of the National Housing Act. We felt this financing medium would encourage a great many more private builders to supply the defense housing market and thereby take up more rapidly the lag in fulfilling the needs of the country and of the workers. . . . Of course, there is no way we can force private enterprise to supply housing, and if they feel they are unable to take the risks to be incurred from attempting to supply this market, we will of necessity have to go in and construct the units with public funds."

He encloses a recent FHA report on new homes started all over the country under its Section 203 in the under $5,000 class, showing numbers started July-December 1940 as compared with the second half of 1939 and January-February 8, 1941 as compared with the previous year. The trend is upward as it has been for several years, but there is nothing to indicate that the last increases are due appreciably to defense needs.

The Coordinator's summary report of February 26 shows that as of that date, funds had been allocated to Government agencies for 68,612 housing units, of which 37,036 were under contract and 2,315 completed.*

Federal Works Agency reports, going into more detail, show USHA with a head start, Navy and PBA not far behind. They and several other agencies are functioning under the Federal Works Administrator smoothly and efficiently. They could unquestionably expand their present scale of action as fast as Congress makes funds available if permitted by the Coordinator. At present it is his policy to hold everything possible in abeyance until Congress passes the Title VI amendment in the hope that it will miraculously galvanize reluctant private enterprise into activity.

Fourth Failure: To grasp the principle that risks too great to be incurred by private enterprise are too great to be unloaded on individual workingmen.

A corollary is that defense housing should be rental housing. Workingmen interested in home ownership would be wise to bank their savings until the emergency is over and they find where their permanent jobs are likely to land them—if they are lucky enough to have permanent jobs.

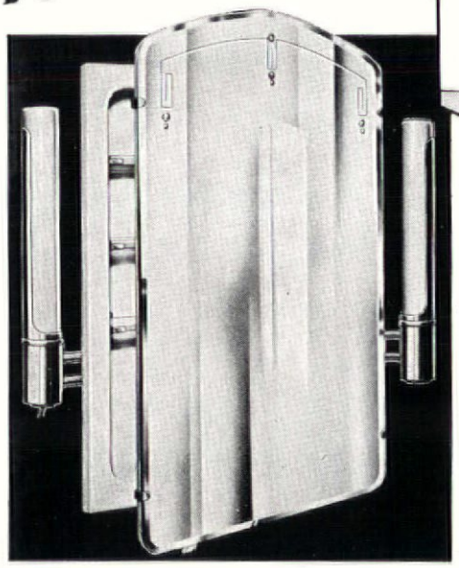
The Title VI amendment of FHA's National Housing Act impresses the writer as one of the most cynical bits of legislation ever penned. It takes all the risk out of speculation for the speculative builder. It insures the careful banker against loss in lending mortgage money to the speculative builder. The risk is then divided between Uncle Sam and the workingman.

Advocates of the measure admit that the foreclosure rate will probably be abnor-

(Continued on page 102)

* For an explanation of these seemingly healthy statistics, see p. 14, cols. 2 & 3.—Ed.

ARCHITECTS!
Here's YOUR Seal of Protection



125 YEARS OF QUALITY
Lawson

— Now You Can Specify

TIME PROOF ALL-PORCELAIN FINISHED CABINETS
(With or Without Tubular Sidelights)

At Baked Enamel Price Levels!

FOR a century and a quarter the name Lawson has been coupled with metal products of "High Quality at Popular Prices."

Zealously, we have guarded the reputation of our good name and of the good will we enjoy from architects and builders.

Never, even in our low-priced baked enamel line, have we compromised with quality. And today, as we commemorate our Century and a Quarter of Progress with a complete line of vitreous porcelain enamel cabinets for every size bathroom, we pledge you the perpetuation of our policy of high quality at moderate prices. Thus, you will continue to render your clients a greater service by specifying Lawson.

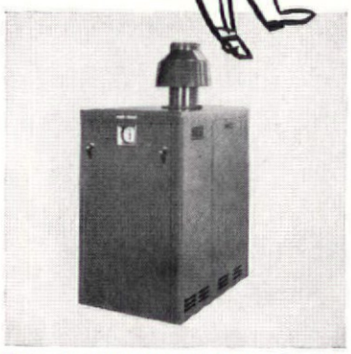
For details and prices of this complete Century and a Quarter Anniversary Line—look in the 1941 Sweet's, Section 27, Catalog 84—or without obligation, write for AIA File 29il—today.

THE F. H. LAWSON COMPANY
Bathroom Cabinet Division, Cincinnati, Ohio

World's Largest Builders 125 YEARS OF QUALITY Lawson of Bathroom Cabinets

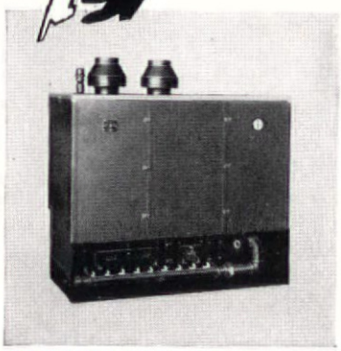
SOLD EXCLUSIVELY THROUGH WHOLESALE OUTLETS

"You say 23 different capacity G-E Gas boilers to choose from!"



FOR AVERAGE RESIDENTIAL INSTALLATIONS there are 8 sizes for steam or vapor systems, with capacities from 76,000 to 345,000 Btu output per hour.

ALSO: 8 boilers for hot water systems with capacities from 76,000 to 345,000 Btu per hour.



FOR COMMERCIAL, INDUSTRIAL or exceptionally large residential applications there are G-E gas furnaces in 15 sizes with capacities ranging from 422,000 Btu per hour output to 1,372,000 Btu per hour. These furnaces may also be used in multiple installations.

"What else is unique about G-E Gas Furnaces besides the fact that you have a unit to fit each and every capacity requirement?"

PLENTY!

Here are four major requirements you and your client can depend upon when you turn to General Electric:

- G-E units' installation cost is low.
- G-E units require little or no service.
- G-E units' controls are easily accessible.
- G-E units are easy to adjust.

A few of the General Electric advancements in design follow: Dependable and positive operation by combining gas regulator, snap-action valve, solenoid valve and throttling steam, vapor or water limit. Pilot valve allows gas supply to pilot to be controlled independent of Main Line Valve. Thermostatic Safety Pilot designed to provide maximum safety by shutting off gas supply if pilot light is not burning.

You will want to know the complete story on G-E Gas Furnaces—and other products in the G-E line. Consult Sweets' $\frac{26}{11}$, or write direct to General Electric, Div. 413, Bloomfield, N.J.

GENERAL ELECTRIC

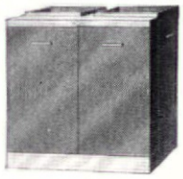
TURN TO

. . . for the complete line of Heating and Air Conditioning

(here are some typical examples)

G-E AUTOMATIC HEAT!

Oil or gas fired, in many sizes. For steam, hot water, vapor. Coordinated in design, self-oiling with inverted impact-expansion.



G-E WINTER AIR CONDITIONERS!

Oil or gas fired. OIL: 3 sizes, 0.95 to 1.90 gal. per hr.—100,000 to 200,000 Btu per hr. GAS: 14 sizes, 60,000 to 270,000 Btu per hr.

G-E ROOM AIR CONDITIONERS!

Three types for cooling a single room or group of rooms, and one for centrally heated and cooled commercial buildings.

G-E UNIT AIR CONDITIONERS!

Ranging from a net total room cooling effect of 19,740 Btu per hour to 113,400. All self-contained. For small stores, restaurants, offices, etc.

The surest proof of the value of a product rests upon the results obtained by using it on numerous jobs. That LIGNOPHOL has given longer life—greater beauty and smoother surfaces to many residential, commercial and institutional floors, is a well known matter of record. LIGNOPHOL fills the cells of the wood with toughening resins, with penetrating oils and with special preservatives which bar the entrance of fungi, molds and other wood destroyers. It will protect your floors against dry rot, cracking, pitting, scuffing and burn marks from rubber shoes.

It brings out the natural beauty of the wood and is suitable for paneling, etc.

Select LIGNOPHOL for floors in residences, schools, gymnasiums and factories and you can rest assured that the job will do you credit. Unlike shellac and varnish, LIGNOPHOL leaves nothing to wear off.

See reproduction of various woods in natural colors in Sweet's Catalog, page 17/40.

LIGNOPHOL
The **ONE** Application Wood Finish

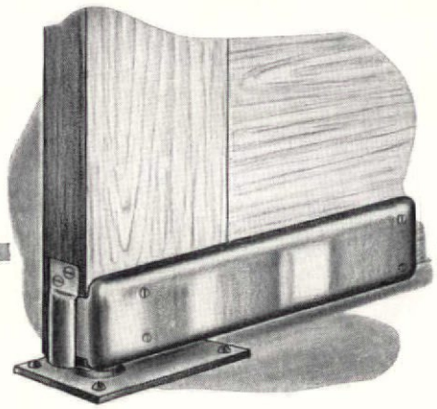
LIGNOPHOL
Preserves and brings out the natural beauty of wood

LIGNOPHOL
Leaves nothing to wear off

DEPT. F-4

L. SONNEBORN SONS, Inc.
88 LEXINGTON AVE. NEW YORK CITY

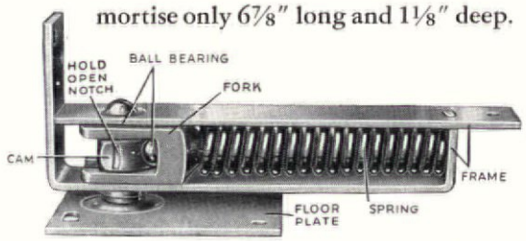
Stanley Floor Hinge



Double Acting Ball Bearing

Specify this hinge – No. 155 – for double-acting doors of residences. For doors 1⅛" to 1¾" thick, it will hold the door open at an angle of 90°. Equipped with hardened steel bearings which carry the thrust of the spring as well as the weight of the door. The reversible side plates are of reduced size and gracefully proportioned – a welcome departure from the "gingerbread" type of hardware.

Very little cutting out is required for its installation, as it takes a mortise only 6⅞" long and 1⅛" deep.



YOUR GUIDE TO GOOD HARDWARE

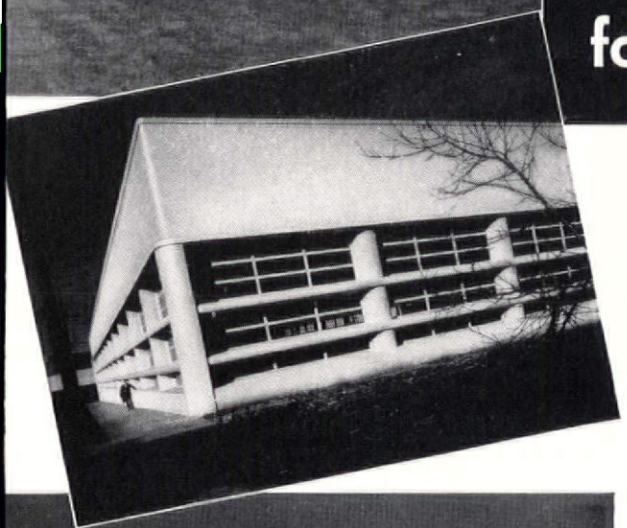
Stanley Catalog No. 61, giving full details on the complete Stanley Hardware line, will prove handy in preparing your specifications. Write for your free copy. The Stanley Works, New Britain, Connecticut.

STANLEY

HARDWARE FOR CAREFREE DOORS

Armstrong Tire & Rubber Co.'s Natchez (Miss.) plant includes a 160 x 760-ft. factory, office building and power plant. Architectural Concrete exterior walls; reinforced concrete Z-D barrel shell roof with 40 x 50-ft. clear bays. Roberts & Schaefer Co., Chicago, engineers. J. T. Canizaro, Jackson, Miss., architect.

Industry endorses CONCRETE for economy, firesafety, appearance



Warehouse for Woodbury & Company, dealers in industrial supplies and heavy hardware, Portland, Oregon. Richard Sundeleaf, architect. Wegman & Sons, contractors.

•

(Below) Engine test house, Pratt & Whitney Aircraft Division of United Aircraft Corporation, East Hartford, Conn. Albert Kahn, Detroit, architect. R. G. Bent Co., Hartford, contractor.

Architectural concrete offers a unique combination of advantages for industrial and defense buildings:

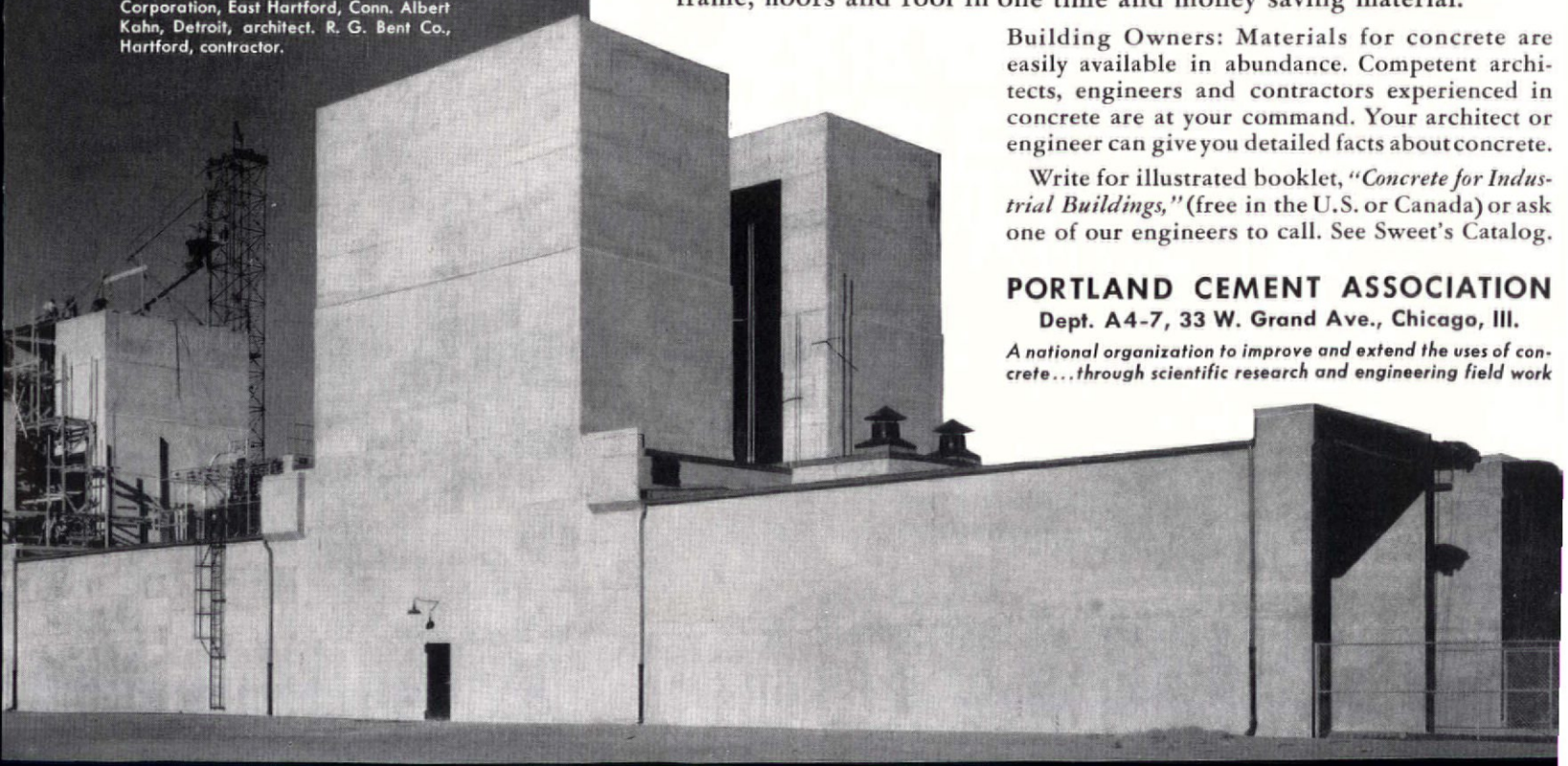
- **SPEEDY** construction; contractors are setting constantly faster time schedules in completing concrete buildings. Concrete jobs proceed all winter.
- **ECONOMY** in first cost and maintenance.
- **ADAPTABILITY** to any requirements of occupancy; for example long, clear interior spans are easily provided.
- **FIRESAFETY**—concrete can't burn; supports heavy loads even at high temperatures.
- **WEAR RESISTANCE** for heavy-duty floors and ramps.
- **RIGIDITY** to dampen vibration and resist shocks.
- **GOOD APPEARANCE**—Architectural concrete has won national recognition as a means of giving outstanding architectural distinction to factories and buildings of all kinds. Walls are cast integrally with frame, floors and roof in one time and money saving material.

Building Owners: Materials for concrete are easily available in abundance. Competent architects, engineers and contractors experienced in concrete are at your command. Your architect or engineer can give you detailed facts about concrete.

Write for illustrated booklet, *"Concrete for Industrial Buildings,"* (free in the U.S. or Canada) or ask one of our engineers to call. See Sweet's Catalog.

PORTLAND CEMENT ASSOCIATION
Dept. A4-7, 33 W. Grand Ave., Chicago, Ill.

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



(Continued from page 98)

mally high, but claim that it will cost the Government less than if it built the houses itself, assuming apparently that what the Government builds will be a total loss. Little is said about the effect on the workingmen and their wives of losing the homes into which they have put all their savings and overtime pay. True, they did not have to make any down payment; "carrying charges are no more than rent." They are pretty certainly more than rent in Government-built houses would be. "When the job ends, they will just walk out." Leaving the furniture behind? Will they not have been urged, so long as the job lasted, to make all the payments they could squeeze out to increase their equity? Won't the ballyhoo boys have been telling them about security for their old age, and home ownership being the best investment in the world, and all the rest of the come on?

Home ownership sales talk to the little man with a temporary job is as benevolent as the patent medicine advertisements of cancer cures before the Pure Food and Drugs Act. There are ways of making home ownership safe for working people, which we have never got about trying yet in this country. But Title VI is decidedly not one of them.

Fifth Failure: To see the futility of trying to curb overcrowding and skyrocketing rents after the evils have become established.

A Committee of the National Association of Housing Officials and Commissioner Elliott of the NDAC appear to agree, on the basis of our very unsatisfactory experience during and following World War I, that, beyond establishing Room Registries in defense industry areas, there is little to do except watch and pray, make investigations and reports, use moral suasion on landlords, try the fear of publicity, and have recourse to legislation only if all else fails. A committee of lawyers is said to be drafting a bill.

But why do we have to wait to see what happens? Whether there is overcrowding? Whether there is profiteering? Whether health suffers? How much discomfort workers and their families will stand before they leave in disgust? Whether the quality and quantity of production will suffer? Don't we know the answers?

As surely as sparks fly upward, where the demand for house space greatly exceeds the supply, rents will rise and keep on rising until they force up wages, after which they will rise again. The spiral of inflation is then under way. Why let it start?

Is there any doubt that sparks *do* fly upward? Remember the full-page special article in the New York *Times* of December 22 with reports from Boston to Seattle? Portsmouth navy yard is "losing 100 workers a day because men could not find decent places for their families to live in." Paterson reports "Every sleeping room in the local YMCA is filled and beds and lockers have been installed in rooms ordinarily used for meetings." At Norfolk "3,000 persons, including many children, live in trailer camps with improper sanitation." The second article, on January 16, is a close-up of what the national defense effort has done to the staid old Pennsylvania town of York. It has started money circulating, added to bank deposits, paid off some debts, increased purchases of consumer goods and services, started rents upward and made it exceedingly difficult to find *any* place to live. Liquor stores work their men in two shifts from 9 A. M. to 10 P. M. Prostitution, syphilis and juvenile delinquency are on the increase. The atmosphere of a gold mining camp of the rawest frontier days superimposed on this ultra respectable background in the name of national defense and the pres-

(Continued on page 106)

Every Home Should be *Calked*

STOPS DRAFTS AND LEAKS—CUTS FUEL BILLS

Residence in Johnstown, Pa., designed by H. M. Rogers, R. A. and built by J. J. Saylor, Genl. Contr., both of Johnstown.

PECORA CALKING COMPOUND USED

The end walls in the above residence are of brick veneer and the front and rear walls are clapboards. Calking was especially important to permanently seal the joints where wood and masonry join.

Pecora Calking Compound is widely used in residence construction because no material is more dependable, no material so long tested by actual use. Pecora Calking Compound will not dry out, crack or chip when properly applied. Pecora-protected homes use less fuel, are freer from drafts and maintain more uniform temperatures.

Pecora invites your specification and request for details.

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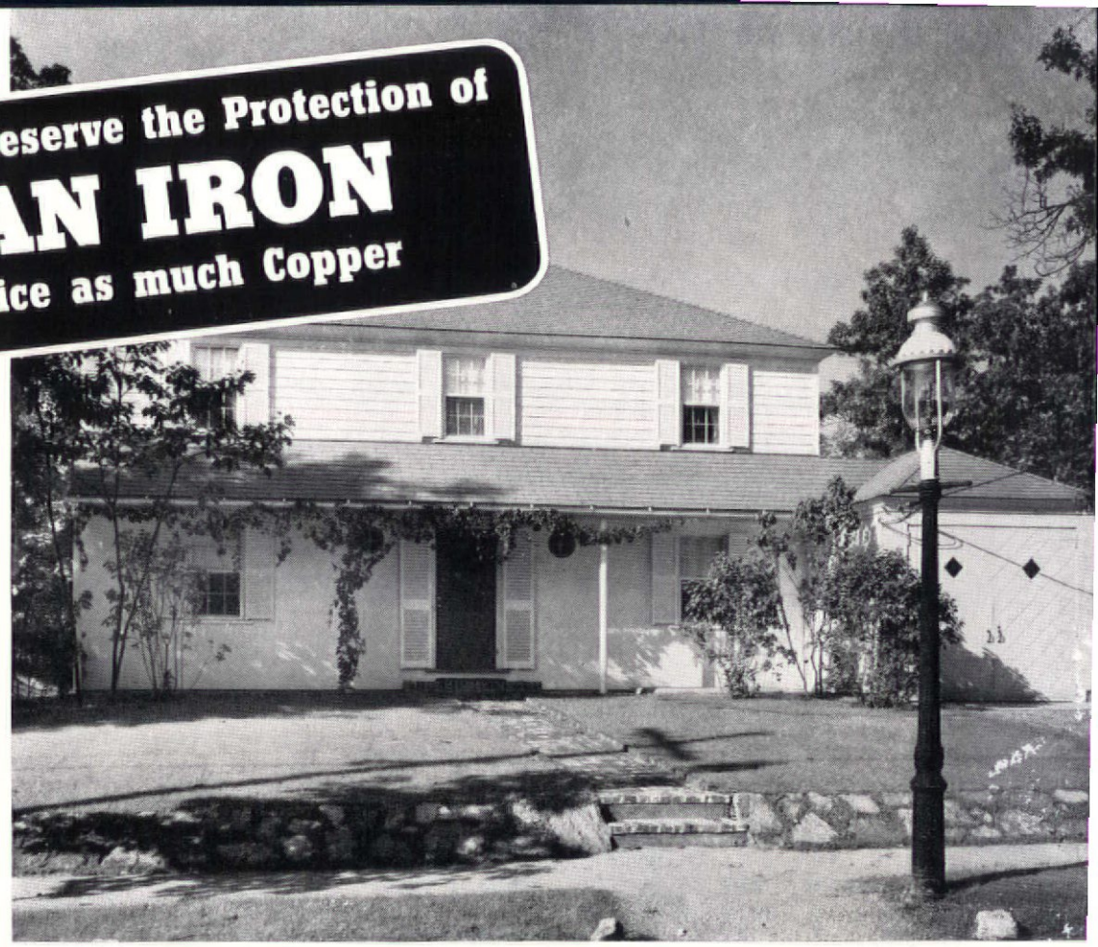
PECORA CALKING COMPOUND

ALSO MORTAR STAINS • SASH PUTTIES • ROOF COATING • PECOMASTICS

Small Homes, too, Deserve the Protection of TONCAN IRON it contains twice as much Copper



Gutters and downspouts of this attractive home on the Eastern Seaboard are long-lasting Toncan Iron.

REPUBLIC STEEL DEFENSE FOR AMERICA

IN THIS EMERGENCY

Paraphrasing an old operatic lyric—"A steelman's lot is not a happy one." When business is at low ebb, the struggle is to get enough tonnage to produce steel economically. When the tide of business swings to the other extreme, the big job we all have is to satisfy the customer who is unable to get all the steel he needs.

Believe me when I say that this is one time when the wheel that squeaks the loudest is not getting the grease. We are doing everything humanly possible to be helpful in this emergency and to be fair in the apportioning of our output—and to assist you further we are constantly setting new records in all our plants in our production of ***steel—first line of national defense.***

R. J. Wysor
PRESIDENT

Only a few dollars extra—an insignificant part of the total building cost—provide this home with the protection that Toncan* Iron sheet metal gives—protection against rust and corrosion. Every small home you design needs the protection of Toncan Iron—the exclusive Republic alloy *iron* that contains twice as much copper as the best copper-bearing steel available today. Long a time-tested favorite for both interior and exterior sheet metal work, it costs less per year of service and minimizes repairs and replacements.

Specify Toncan Iron for all sheet metal work. There is no better way to safeguard the building owner's investment. Our new Toncan Iron Booklet will give you all the reasons why. Copy on request, or see Sweet's Catalog.

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*Reg. U. S. Pat. Off.

REPUBLIC TONCAN IRON

An alloy of refined open-hearth iron, copper and molybdenum—*that grows old slowly*

IS IMPORTANT

THAT'S WHY THEY PREFER

CHURCH *Plastic Covered* **SEATS**

IN WHITE OR COLOR

IF YOUR BATHROOMS have CHURCH SEATS you receive unconscious approval, for CHURCH SEATS are recognized by everyone as the best. Best made—Best known.

CHURCH *Sheet Covered* SEATS come in white and many attractive colors to either match or blend with other appointments. They cost but little more than ordinary painted enamel seats—are well worth the small difference.

You are invited to write for any information desired and an actual sample of *Plastic Sheet Covering* used on Genuine CHURCH SEATS. C. F. CHURCH MFG. CO., HOLYOKE, MASS., Division of American Radiator & Standard Sanitary Corporation.

Church Mol-Tex—The *white* molded Seat everyone's talking about. It's immune to abuse—to burns, bangs, stains—indestructible. Specify MOL-TEX for apartments, hotels and all types of public buildings.

CHURCH *Plastic Covered* **SEATS**

"THE BEST SEAT IN THE HOUSE"

Cabot's Stains for beauty at low cost

Beauty of the grain and texture of wood is revealed and emphasized through the clear, rich colors of Cabot's Creosote Stains. It is not concealed beneath a painty film. The Cabot-stained house above, at Winchester, Mass., was a prize winner in the latest *House Beautiful* competition. Architect: Jerome Bailey Foster.

Cabot's Creosote Stains are moderately priced, and they save money in application and in upkeep costs. Their vehicle is pure creosote—best wood preservative known. The architect of the Cabot-stained house above is John Dinwiddie, San Francisco, Cal.

Only in Cabot's Stains can you get the advantages of our patented Collopaking process. The pigments are divided to sub-microscopic fineness and *colloidally combined* with the oil. Thus, the color penetrates further, giving a depth and richness not obtainable with other materials.

Cabot's Shingle Stains

Creosote

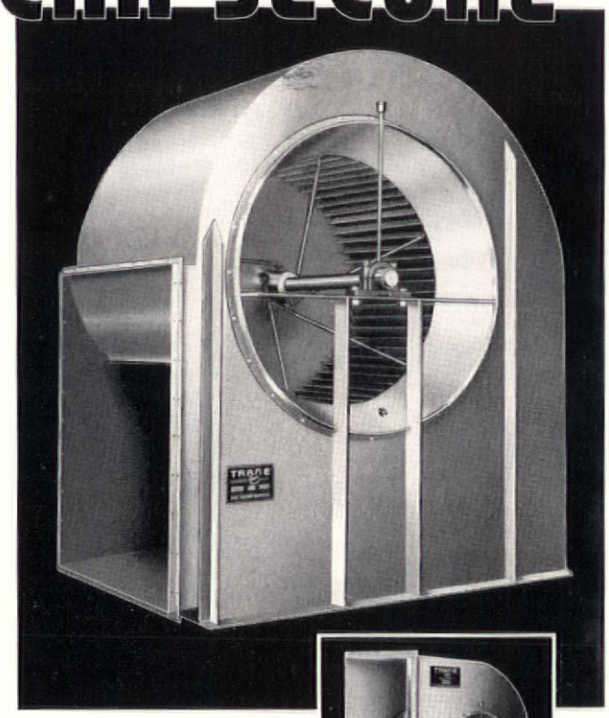
Heavy-Bodied

Free Booklet "Stained Houses"

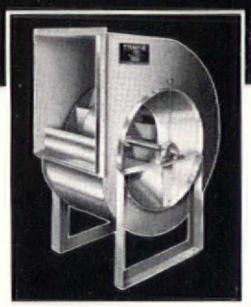
Shows pictures of many prize winning Cabot-Stained houses. Contains full information about both the *Creosote* and *Heavy-Bodied* Stains. Write Samuel Cabot, Inc., 1273 Oliver Building, Boston, Mass.

Now YOU CAN SECURE TRANE AIR BLOWER FANS

Previously Sold Only as an Integral Part of Trane Equipment, this Extensive Line now available Separately for all Heating and Air Conditioning Applications



A Trane No. 54 Single Width Single Inlet Type FC Fan arranged for bottom horizontal discharge. The full box-type base construction illustrated is typical for both forward and backward curved fans, sizes No. 33 to No. 66 inclusive.



Illustrated is a Trane No. 15 Single Width Single Inlet Type BI Fan convertible to any standard discharge. This housing construction is typical for all Type BI and Type FC Fans, sizes Nos. 4 to 30 inclusive.

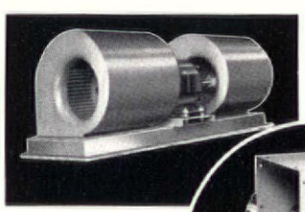
The Trane Fan line includes all sizes and types required for heating and air conditioning work. The fans range from 4½" to 66" — single and double width, belt and direct drive, backward and forward curved wheel construction.

Type FC Fans employ forward curved, multi-blade construction. Type BI Fans are constructed with backward curved blades, having a self-limiting, non-overloading power characteristic.

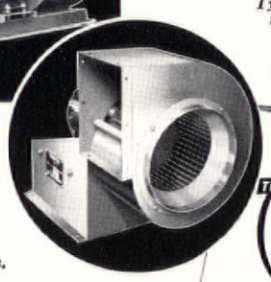
The line also includes utility blowers and multiple fan units for general supply and exhaust duty.

Trane experience in air handling problems is a part of the background of Trane Fans. These fans are of the same design as those that have for years been integral parts of Trane Unit Heaters, Unit Ventilators, Air Conditioners, Evaporative Condensers, and allied units of the complete Trane line of heating, ventilating, and air conditioning equipment.

Now in a separate carefully integrated Trane Fan line, architect, engineer and contractor may obtain the same advantages, the same skill and care in construction, and the same careful testing for capacity, balance and quietness found only in a Trane Fan.



A Trane Multiple Fan Unit for a variety of applications.



Utility Blowers are available in capacities up to 4500 cfm.

SEND FOR THIS . . .

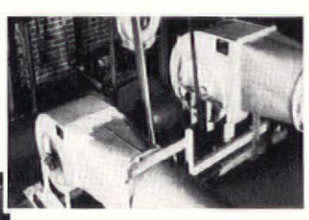
THE TRANE COMPANY
2004 Cameron Ave., La Crosse, Wis.

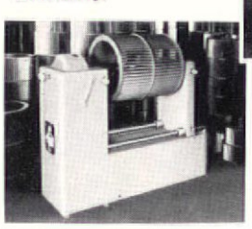
Please send me Bulletin DS-348, the new 52 page catalog describing Trane Fans.

Name_____

Address_____

All Trane Fans are tested and rated in accordance with the Standard Test Code as adopted by the NAFM and the A.S.H. & V.E. Right: A performance test in the Trane Laboratory.





At left: Every Trane Fan Wheel is carefully balanced and checked for weight distribution and alignment before it is assembled in the casing.

TRANE

THE TRANE COMPANY AIR LA CROSSE, WISCONSIN

Also TRANE COMPANY OF CANADA, LTD., TORONTO, ONTARIO

Heating . . . Cooling . . . Air Conditioning Equipment from 85 Offices

Unit Heaters - Specialties - Convectors - Cooling Coils - Blast Coils - Fans
Unit Ventilators - Compressors - Air Conditioners - Low Pressure Refrigeration

(Continued from page 102)

ervation of democracy is somehow profoundly shocking.

Is that the way to build up morale for maximum output? Or for citizenship in a democracy worth preserving?

Sixth Failure: To control the inflational spiral of rent increase before it starts.

Hitler's juggernaut is speedier than the Kaiser's. We won't have time to repeat all the mistakes we made before. This housing bottleneck is already creating a traffic jam.

The time to build houses is before the date they are needed. It can only be done on a mass production basis. Only the government agencies are able to do that. The houses should be rented, not sold.

The way to prevent unwarranted rent increases and a flock of accompanying evils is by freezing all rents in a given locality as of the date when a defense industry large enough to require importation of labor is allocated to it. Nothing of the sort can, of course, take place by executive decree. National legislation would probably be unconstitutional and, at any rate, undesirable. It should come about by voluntary action of the 48 State legislatures in passing a simple enabling act and by voluntary action of each defense locality in adopting its provisions.

As soon as the Office of Production Management let it be known that the existence of such a State Enabling Act was a necessary condition for the assignment to a site within that State of any large defense order involving plant and labor expansion, it is the belief of this observer that the 38 legislatures in session would pass the enabling act without much discussion or delay and that special sessions of the others would be summoned speedily.

There are very few industries which have to be located in just one place. Usually there is a wide variety of choice. Too many already have been put along the seaboard and in centers of population. The present tendency is to decentralize, to go inland, to spread over the country. Competition for the defense industries is keen. If an agreement to adopt the rent freezing ordinance were a condition of getting the new plant, it is hardly doubtful that city councils, township commissions, or county freeholders would be found willing to agree. It does not hurt much to renounce what you have never had—especially when you get a substantial prize in return for doing it.

Rent freezing would not be confined to any economic level. It would apply to hotels and furnished rooms as well as to houses and apartments. There would be no exceptions. There would be, however, the right of review for individual cases of hardship—either way—before some designated tribunal. No effort would be made to set the date farther back than the date of allocation. It is not a reform measure, but a preventive one.

There is nothing new about the idea except its localized application to defense industry areas. All the belligerent countries of Europe and most of the neutrals lived under rent freezing acts as of August 1914 until the war was over and most of them for some time longer. They prevented a vast amount of hardship.

Why should there be any hesitation about keeping the owners of shelter space in a defense industry town from profiteering at the expense of their fellow townsmen, old and new, at the risk of sabotaging the whole national effort? If the national emergency justifies conscription of man power for the army and navy and taxation of excess profits of industry, doesn't it justify the *prevention* of excess profits in the provision of shelter for war industry workers? Would that involve "abandoning an institution we are attempting to preserve"? What are we arming to defend anyhow? The America of George Washington and Abraham Lincoln? Or the America of George F. Babbitt?

FLOORS WITH THE

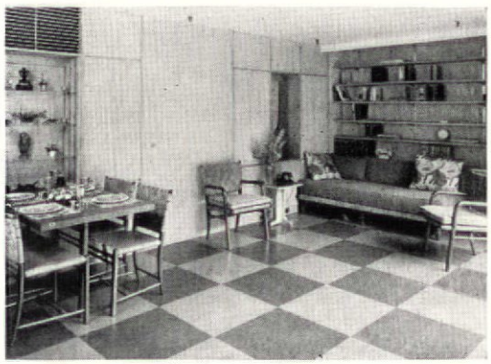
Warmth and Charm

of the HEARTHSTONE

Flexachrome in Entrance Hall of Modern Residence

FLEXACHROME, the new *plastic* floor tile, offers unusual design and color opportunities in the residential field. Colors range from vivid, brilliant solids to delicate, blending pastels — from an inky black to true, clean white. Thirty-three solid and mottled colors, available in sixteen sizes, make the architect's problem of design selection easy and enjoyable. . . . And the peerless beauty of Flexachrome is matched by its iron-like durability. It has safe, firm foot comfort and it will not scar permanently from special abuses such as hot grease or burning cigars or cigarettes. The only maintenance needed is an occasional mopping with mild soap and warm water . . . Here is a *better* floor for kitchen, bath, recreation room and entrance hall areas. Write today for informative data and the name of the nearest approved Flexachrome contractor.

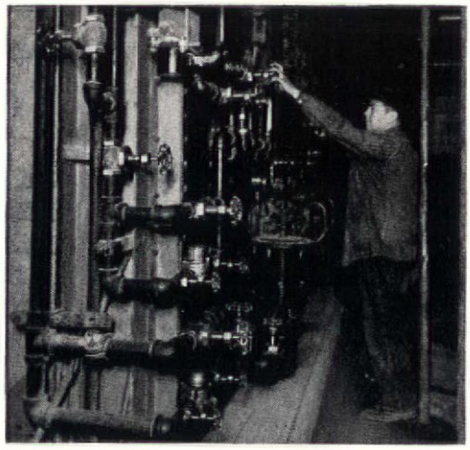
The TILE-TEX COMPANY, Chicago Heights, Ill.
Eastern Sales Office: 101 Park Ave., New York



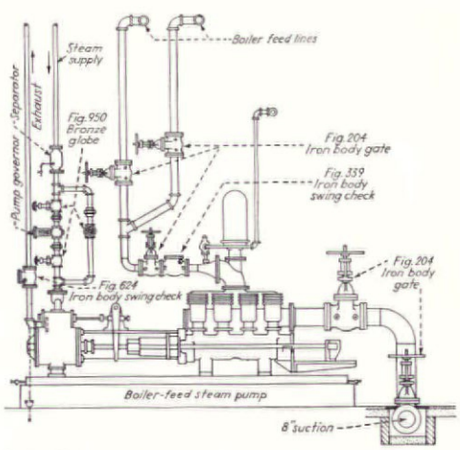
OUR constant objective is to furnish the architect with an honest, steadily improved product that will enable him to design architecturally correct floors which can be installed and maintained properly at minimum cost.

Flexachrome... AN EXCLUSIVE **TILE-TEX** PRODUCT

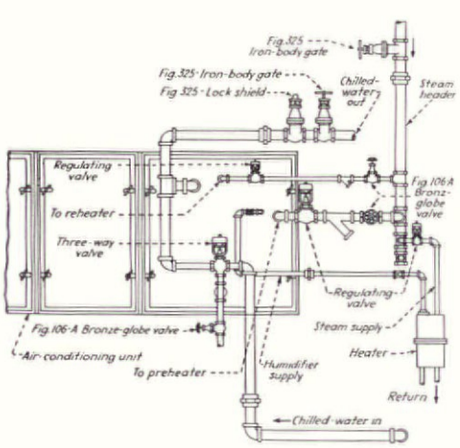
VALVE DETAILS: CIVIC BUILDING



First of four boilers is now in operation, providing heat and speeding "dry-out" during interior finishing work. Jenkins Bronze Valves are shown on boiler feed and fuel oil lines.



Boiler feed steam pump installation detail showing steam supply and return, feed water supply and discharge connections—and the placing of Jenkins Bronze Globe, Iron Body Gate and Swing Check Valves.



Chilled water is pumped from the basement to 30 air conditioning units located throughout the buildings. Diagram shows chilled water and steam lines—and function of the Jenkins Valves.

New Criminal Courts Building and Jail, New York, N. Y.

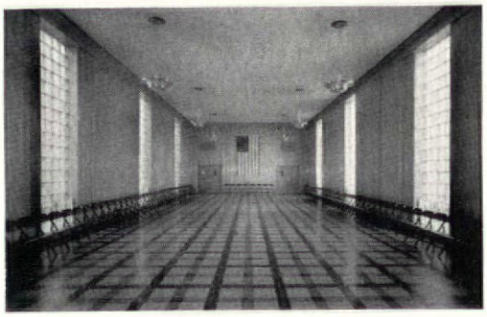
Associate Architects: CHARLES B. MEYERS and HARVEY WILEY CORBETT. Consulting Engineers (Plumbing, Heating and Electrical): SYSKA & HENNESSEY. Heating and Ventilating Contractors: ALMIRALL & CO., INC. Planned under the direction and supervision of City of New York, Department of Public Works — Irving V. A. Huie Commissioner; J. Frank Johnson, Chief Engineer.

THE ARCHITECTS designed this modern building project to replace the historic Tombs and Criminal Courts Buildings and to provide facilities for all the diversified activities centering around a criminal court and jail. Widely differing types of space units range from typical business offices and record rooms to an infirmary and a chapel.

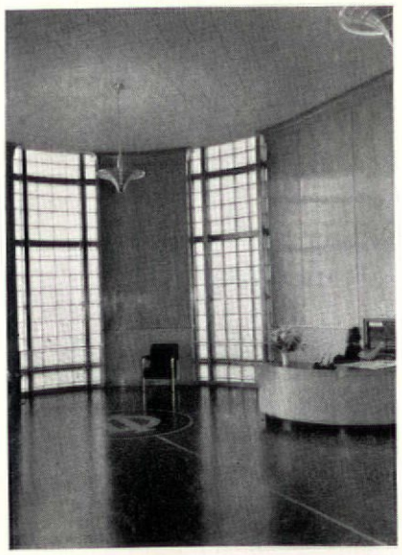
The problems involved in heating and ventilating these various areas were solved with the aid of several unusual applications, including the chilled-water air conditioning units (shown in detail at left). All this heating and ventilating piping is served by a wide variety of Jenkins Valves ranging from giant Iron Body Gates to tiny Bronze Globe Valves. Prompt delivery of these Jenkins Valves was obtained from a reliable, local supply house. Here is another outstanding example of the slogan —"In valves, Jenkins gives you everything".

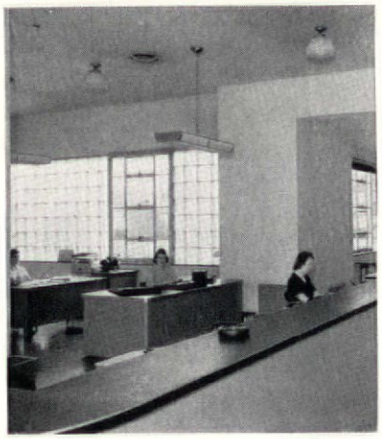
New Building "DESIGNED FOR DAYLIGHT" ...with PC Glass Blocks

THE GENEROUS USE of PC Glass Blocks by Architect Charles F. Owsley in this new Isaly Dairy Company building in Youngstown, Ohio, has resulted in a building really "designed for daylight." Notice how greatly the panels of glass blocks add to the exterior appearance of the building.



THE ASSEMBLY ROOM derives three advantages from its PC Glass Block panels. Plenty of cheerful daylight. Privacy from distracting outside views. And greater freedom from noise . . . because glass block panels deaden outside sounds.





PRIVACY AND PLENTY OF DAYLIGHT characterize this accounting office. Panels of PC Glass Blocks make the room a bright and cheerful place to work.

THE RECEPTION LOBBY gains in appearance as well as daylight by virtue of ceiling-height panels of PC Glass Blocks. These panels have twice the insulation value of ordinary windows . . . make rooms easier to heat, cut fuel bills.

PC GLASS BLOCKS are being used more widely every day by architects who desire one or all of the many advantages glass blocks contribute to modern construction. Generous transmission of daylight, while guarding privacy. Reduction of heating, cleaning, maintenance, and lighting costs. Insulation against sound. And smart good looks. There are three sizes and eight patterns of PC Glass Blocks. Send coupon for free book of information.

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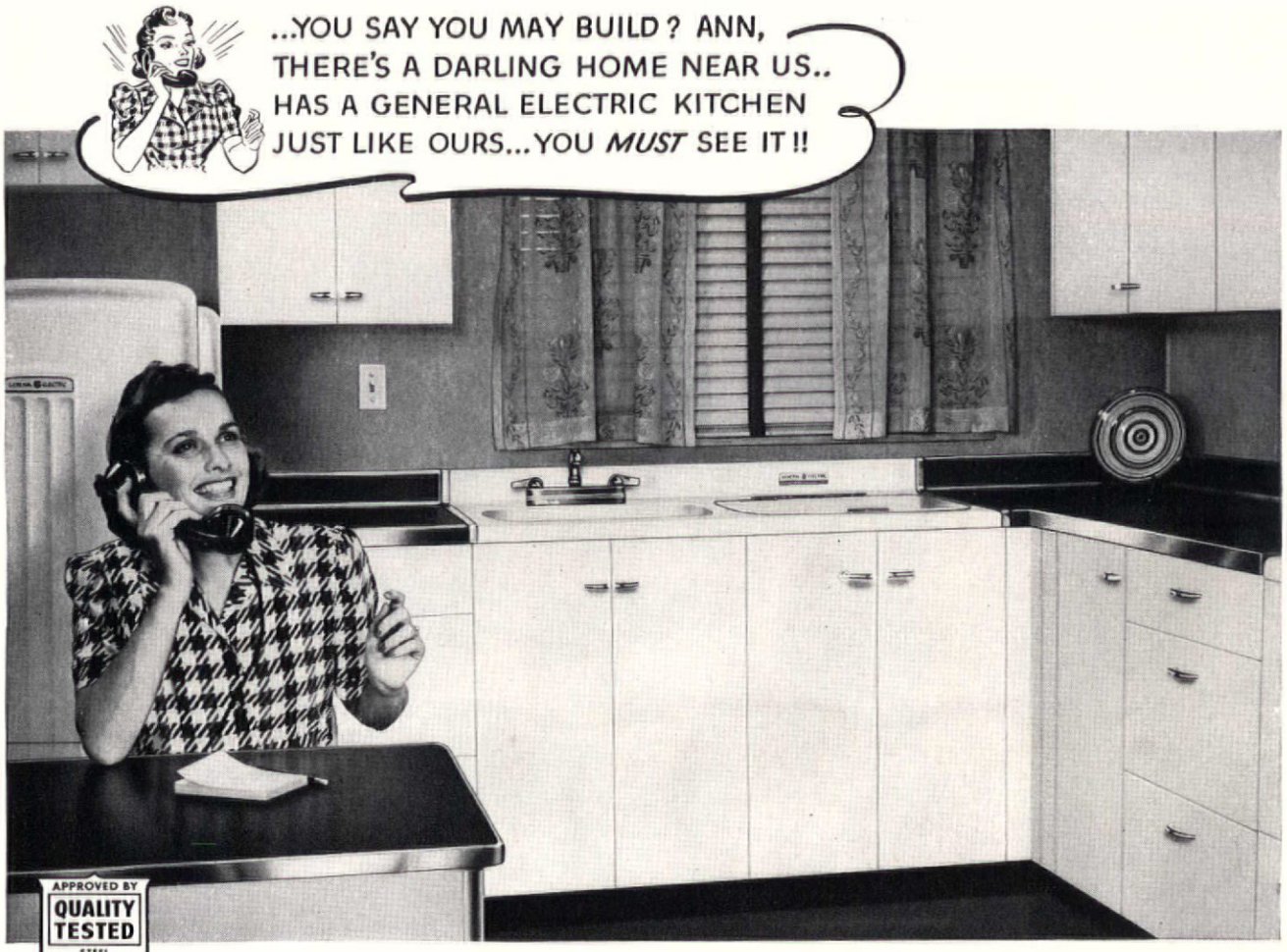
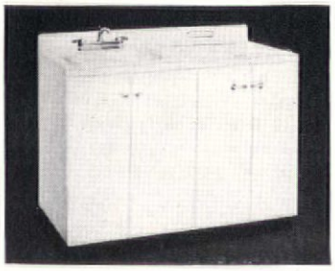


Here's How You Can Be The Top Good Will Builder Of Your Community

Give your clients and customers something to remember you by! Install General Electric Kitchens — they're just about tops in good will building! The streamlined beauty and utility of G-E Steel Kitchen Cabinets and the G-E Electric Sink will be a source of owner pride and satisfaction for years to come. And you'll reap the benefits of word-of-mouth advertising!

Your clients pay no premium of price for General Electric Kitchen equipment. G-E All-Steel Cabinets are *competitively priced* and are easy and inexpensive to install. Their many convenience features have real and *lasting* appeal. Why not get all the facts?

SHE'LL THANK YOU EVERY DAY FOR YEARS



Here's one of the best "salesmen" you can hire . . . the G-E Electric Sink that washes dishes and disposes of garbage *electrically!* Make it a feature of your homes and you'll be remembered — and rewarded.

SEND FOR THE NEW G-E CATALOG!

Gives complete information on G-E Cabinets, Electric Sink, and "Packaged" Kitchens for small homes and apartments. Ask your G-E Distributor for a copy or write direct to General Electric Co., Appliance and Merchandise Department S-1214, Bridgeport, Connecticut.

GENERAL ELECTRIC

PREFABRICATION

(Continued from page 20)

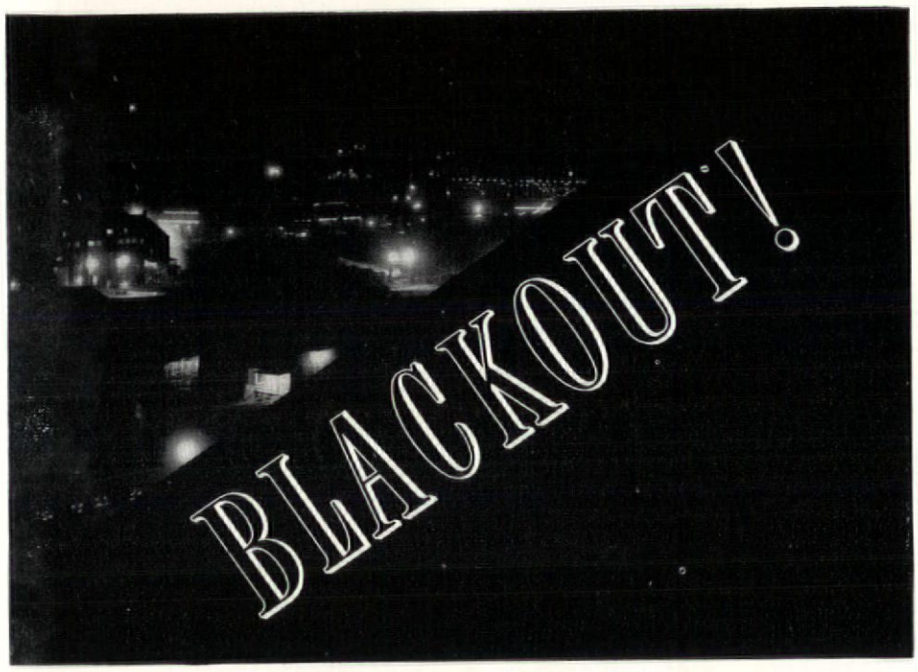
variations have been developed; by lopping 16 ft. off the standard building's length, Dean compresses the house into a two-room and-bath unit with a combination living-bedroom, compressed its f.o.b. price to $1,100 complete with furniture. Forming an L-shaped plan, Dean adds a utility room, second bedroom and garage to the side of the "rear end" of the basic unit, adds $700 to its delivered price. And, for those investors who want a twin house, Dean plans a 12x50 ft. building containing two two-room-and-bath apartments which will sell for $3,000 completely furnished.

While only six piers are necessary to support the standard $1,800 house, a concrete slab foundation is recommended to eliminate vegetation, rodent and insect troubles and to facilitate sub-floor ventilation. Foundation, grading and site utility costs are not, of course, included in the $1,800 delivered price of the standard unit. But, many unusual items are included: an electric range, refrigerator and water heater, bed spring and mattress, living room sofa and chairs, dressing table and mirror, breakfast table and chairs, electric clock, floor lamp, book shelves, window curtains, canvas finish on walls and ceilings, screens, electric heating system whose operating cost in Portand is estimated to be less than $50 per year. As shown in the accompanying photographs, the Haul-a-Way Home's interior finish, equipment and furnishings (mated with the scale of the rooms) would put to shame the appointments of many a larger, more expensive house.

When Haul-a-Way Home No. 1 was set down on a vacant Portland lot for display purposes at mid-February, the accompanying fanfare was modest—a 3 in. newspaper advertisement. Yet, month ago, some 2,000 people had examined the demonstration model, and several hundred had expressed a sincere desire to buy duplicates, once financing terms approaching $250 down plus $25 per month have been arranged. (Such a financing plan would amortize the house and furniture in eight and one-half years.) But, when this went to press, financing of Dean's unique prefabricated house was still an unsolved problem. Local banks and mortgage companies were befuddled by having a single package containing house, lot, equipment and furniture tossed at them, were loath to make a real estate loan on the package. And, the local FHA office has announced that the house is too small, too inexpensive to be eligible for mortgage insurance. Commented Dean, disgusted but not hopeless: "Can you imagine that!" Full information has been made available to Government defense housing officials, but month ago had produced neither orders nor further inquiries.

Pending the arrangement of satisfactory financing terms, Homes Inc. is pondering the wave of tentative orders already received and the production facilities required to meet them. These orders (as yet unaccepted) have come from $40 per month apartment dwellers, from $18 per month slum dwellers, from owners of ocean front property, from private investors who are planning bungalow apartment projects, automobile tourist camps and defense housing projects, from Army officers at near-by and booming Fort Lewis who are eager to rent them for as much as $50 per month, and definite interest has been evidenced by a Seattle Committee charged with the provision of some 1,000 dwelling units for local defense workers.

At mid-month, Dean began work on a plant to handle some of the "bungalow court" orders which can be closed without the arrangement of an easy finance plan. All he needs is a vacant warehouse or garage with a door large enough to accommodate his house on wheels—with 10,000 sq. ft. of floor space he can fabricate eight standard houses at once, turn them out at the rate of one per day per labor shift. By mid-summer he expects to step his production up to several units a day.



WITHIN the new blackout plants, most modern of America's defense factories, light, temperature, humidity and movement of air must meet your specifications as completely as steel and masonry. For here, more is involved than concealment. Here, work can be done to closer tolerances due to control of temperature, and the sabotage of corrosion is eliminated through control of humidity.

York experience dates from the first windowless building in America, the office building of the Hershey Chocolate Company, includes the spectacular S. C. Johnson Plant at Racine, Wisconsin, five of the nine huge blackout buildings of the new Douglas Aircraft Plant at Long Beach, California, and reaches its ultimate expression in the new Ford aircraft engine plant at Dearborn, Michigan, with a 4,400 h.p. air conditioning system.

To help speed the wheels, keep hands steady and eyes clear, protect materials in process and in storage, York experience is at your service. York Ice Machinery Corporation, York, Pennsylvania.

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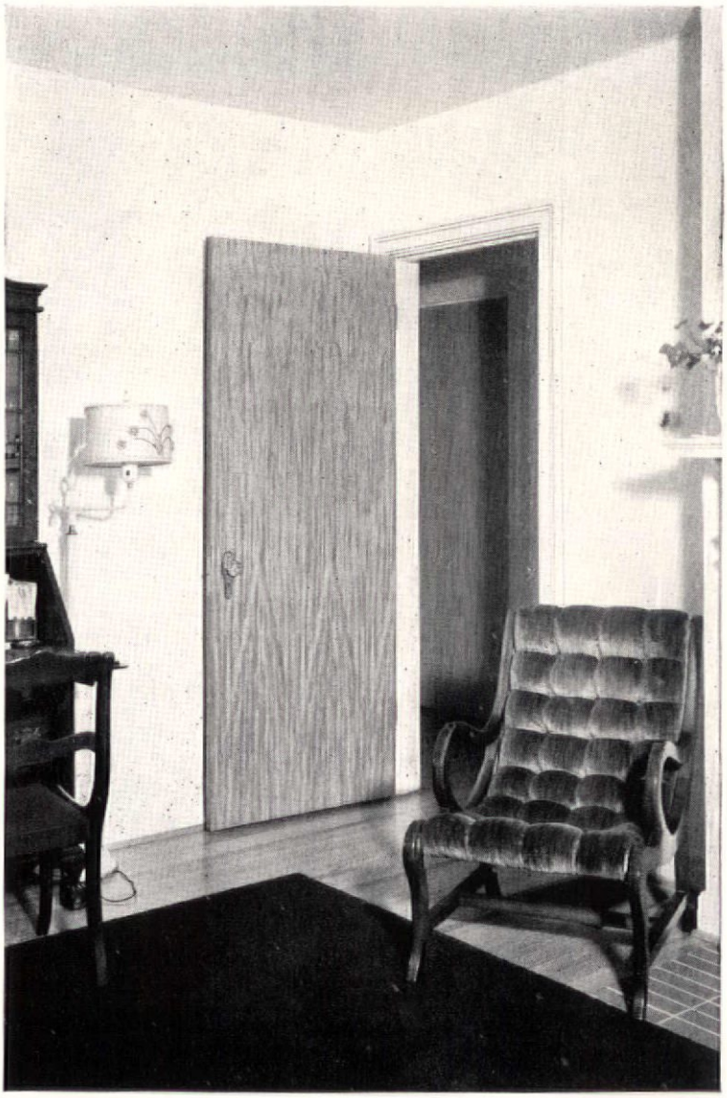
for Even the SMALLEST HOME!



TALK to the average builder or layman and you'll discover that *most people* think flush doors are expensive luxuries, for big homes only.

That *used* to be true, but it isn't now! And that's an opportunity for smart home-designers to make a *big show* with *little money!*

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> ***If any Mengel Flush Door warps in service, and does not straighten out within a reasonable time, it will be replaced free of charge, including the installation cost.***

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Here's an extremely fine, resin-bonded, ¼″ *hardwood* plywood that you can get in several grades, at lower prices than for any comparable plywood on the market. Made in big 4′x8′ sheets, *with grain running the long way,* and with faces of Mahogany, Gum, Walnut, Birch or Oak! Use the coupon!

The Mengel Co., *Incorporated*
Louisville, Ky.

Gentlemen: Please send me full facts about Mengel Flush Doors, and name of nearest supplier ☐. Also facts about Mengel Bord, as described at left ☐.

Name_____

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Write for copy of NEW Plugmold Bulletin. Also for short sample lengths for your office use.

PLUGMOLD

WIREMOLD

PLUG IN ANYWHERE WIRING SYSTEMS

LETTERS

(Continued from page 44)

needed, I feel certain that these houses could be designed and built by local architects and builders at a great saving in time and money. In fact, we have in our files a number of houses recently built by private promoters at a cost of from $2,100 to $3,500.

LOUIS H. ASBURY

Charlotte, N. C.

Forum:

I have read the correspondence between you and the officials having in hand the construction of the housing in connection with the defense program and it is all very interesting indeed.

On top of this came the testimony before the House Committee which showed a more or less complete lack of common sense in connection with proper planning before work was begun with an admitted loss of something like $400,000,000 in extra construction cost which might have been saved.

That would have been a lot of money to distribute among some architects I know who could have set the Quartermaster's Department straight long in advance.

So keep up the good work. We architects can't hold a candle to a publication like yours in getting these facts across to the public. . . .

LOUIS F. BIRD

South Orange, N. J.

Reader Bird will find other reasons for the cantonment program's high cost on page 82.—ED.

Forum:

Your letters on the use of private architects and experienced home builders in the Defense Housing program seem to me to ring the bell with a resounding clang. I hope that your impetus to fresh thinking and new action will not be dissipated by time and politics.

MERLE CROWELL

Rockefeller Center, Inc.
New York, N. Y.

Forum:

. . . I am one of those architects who has for years tried to understand what building and budget meant and that the ultimate success of a job was the production of space to suit the problem. The esthetic virtues were purely that of depending on the skill of the individual, and one is presumed to be modest about that. I am, again, one of those architects who has tried honestly and fairly to obtain consideration in Washington. As far as I can see the picture, I have neither the funds available nor the time or patience to battle the odds that seem to be in the way. Perhaps the government has never heard of me, nor many other men—and that is my misfortune, but quite definitely, if the reputation and organizations of men in practice are worth something, it would seem to me that tax paying systems might be considered as valuable equities and might conceivably be preserved. Instead of building up huge architectural and engineering staffs, give the established and respected firms an opportunity to be heard; pay them market value for their services; and at the same time, give them a chance to earn a living and keep on normal activities.

ELY JACQUES KAHN

New York, N. Y.

Forum:

I have talked to the heads of some of the Government Architects Offices and they are often definitely against giving out work to the private architects. Some of the reasons given are that the private architects are not capable of giving them the services and results expected in that particular Government office, and that if they give out much work to private architects, they will have to let some of their men go.

If the Government will give out a reasonable amount of work to private architects, the men who lost their jobs with the Government through this fact would probably be absorbed in the private offices benefitted directly or indirectly by getting Government work.

WARD BROWN

Washington, D. C.

Forum:

. . . Your letters are clear and accurate . . . In 1918 this office within six weeks organized an enlarged staff and completed all designs, working drawings, details, and specifications for 200 houses for the Westinghouse Mfg. Co. at Essington, Pa. that have been the pride of that Company and those who have lived in them for the past 23 years. These six room houses have been placed under local experienced contractors from $2,250 to $2,750 each, before the Fleet Corporation took charge of the building by large apartment house contractors from New York on a cost plus 10 per cent basis to an average cost of $6,250. Local surveyors at $15 per day were replaced by distant city surveyors at $30 per day by $1 per year friends! Stoves and furnaces were ordered from Buffalo when a cheaper local supply more suitable was available. Surely politics and inexperience cost the citizens plenty while they (the architectural ones) may need relief.

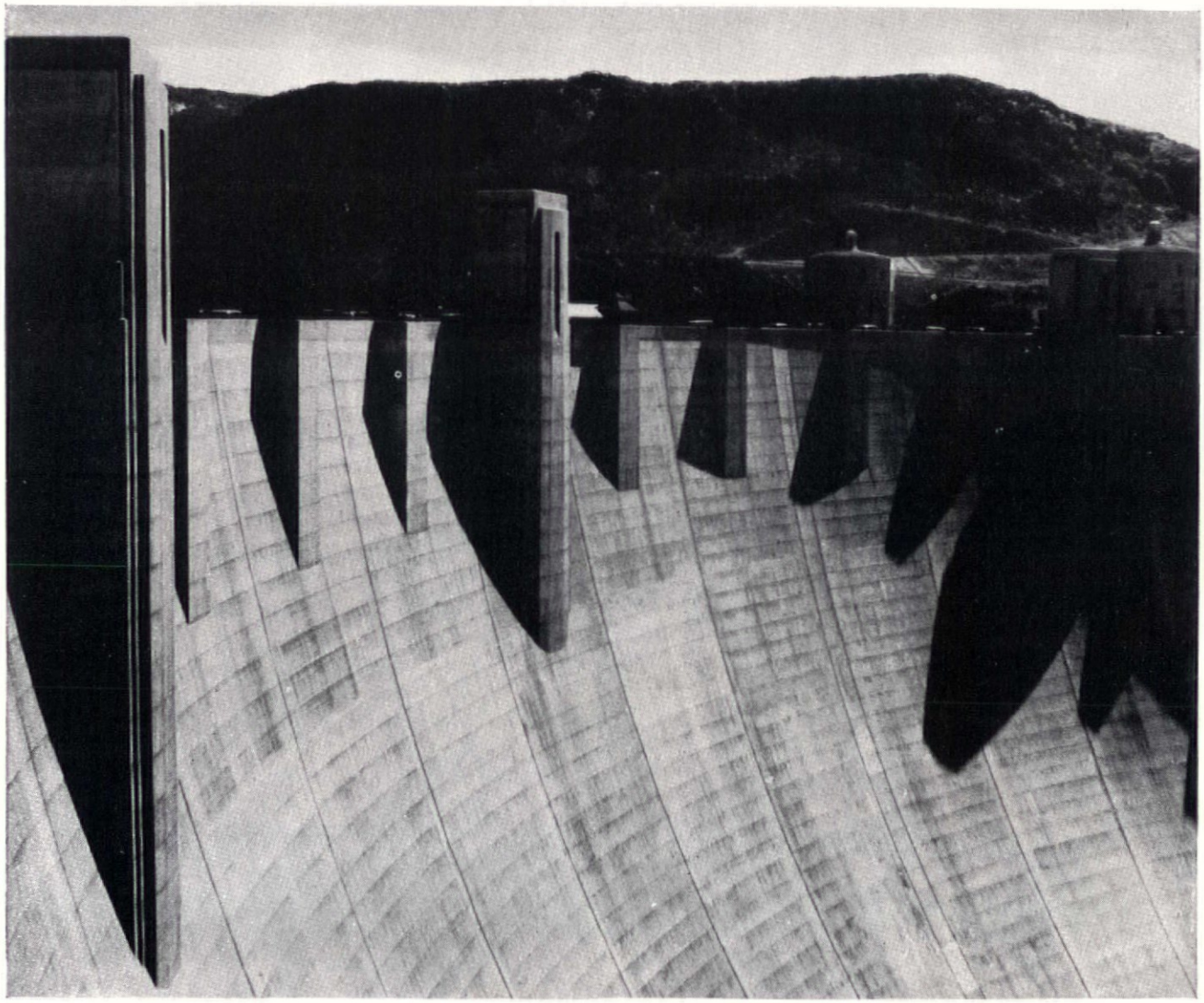
CLARENCE W. BRAZER

New York, N. Y.

Forum:

. . . The outlook in connection with private construction has been very dark since the latter part of last November, so if the Federal Government does not make use of the experienced talent available in the ar-

(Continued on page 114)



How to hold water back!

Every home builder faces the same problem that the engineers of Boulder Dam faced—*how to hold water back!*

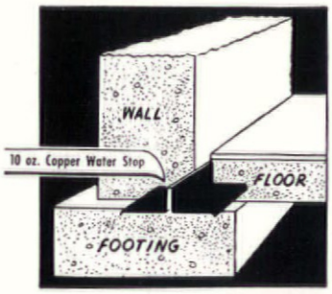
This is the simple secret of a permanently *dry* cellar – a cellar watertight enough to be designed and used as a children's year 'round playroom if necessary.

It can be done—through autumn freeze-over and spring thaw – through summer swelling of materials and winter shrinking.

The answer is copper for water stops and expansion joints.

Set initially in the concrete at little extra labor or material cost, copper joints hold water back. They're doing it at Boulder Dam and they'll do it in that new home you are now designing or building—for years on end.

This is only one (and a very minor) instance of how the Revere Technical Advisory Service is armed with specific knowledge of practical and inexpensive ways to use copper and copper base alloys to waterproof, weatherproof, damp proof and termite proof the home. The services of Revere's Technical Advisors are available to you at no cost or obligation.



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LETTERS

(Continued from page 112)

chitectural profession, the Federal Government will be alone responsible for closed offices and complete destruction of experienced and talented organizations which required many years to organize.

I have had correspondence with the Federal Agencies relative to the employment of architects and architects' organizations combining engineering services, hoping that Washington would not only realize, which of course they do, the availability of this talent, and that shortly some method would be adopted which would permit this talent to serve in connection with the entire National Defense Program, but such correspondence has not produced results to date. . . .

CHARLES C. HARTMANN

Greensboro, N. C.

Forum:

I have read your correspondence with the Defense Coordinator and the Administrator of the FWA on the subject of Defense Housing; it is well stated and has my hearty endorsement.

I believe with you that very few architects, if any, have had experience with housing units which cost as little as $2,000 or $3,000. That, however, is not to say that the experience necessary in developing low cost housing projects is not the very kind that the Government should now take advantage of for its present task. From my own experience in developing the Queensbridge project here in New York, I believe it was the keenness that was shown in saving every available penny and grinding down on every conceivable item that allowed this project to be built in this area and saved more than a million dollars over the sum allotted for the project. Again the same sort of procedure was used when we developed the South Jamaica project.

It is this practical knowledge and experience, coupled with an appreciation of the need for economy of structure, which is now available to the Government through those architects who have done low cost housing and have proven their worth to the Housing Authorities, both local and national.

I believe there is no argument about time, for it is well known that the private architect can accomplish the objective in better time than when the work is done in a bureau.

FREDERICK G. FROST, *President*
New York Chapter
American Institute of Architects
New York, N. Y.

Forum:

Those of us who have had considerable experience in low cost housing, industrial work of magnitude and other work embraced in the Defense Program, have, to use a slang expression, "not gotten to first base."

It seems rather strange that the tremendous expenditures by the Government are being made without the services of qualified men who are thoroughly familiar with conditions in their region, but that they are left in the hands of engineers now in the employ of the companies who will take over and operate the plants.

We realize that the knowledge of these engineers is exceptionally valuable, but in our opinion, quite a saving and far better results could be obtained if they worked in conjunction with the competent architects and engineers who have been in business in these various zones. Private practice, in our profession, is more or less at a standstill and undoubtedly prompt and efficient service could be obtained.

ALFRED S. JOSEPH

Joseph & Joseph
Louisville, Ky.

Forum:

I think your letters on Defense Housing definitely to the point and all of the profession should be grateful to you.

JOHN W. ROOT

Holabird & Root
Chicago, Ill.

Forum:

The attitude of the government officials charged with aiding the housing program can have only the ultimate result of placing

(Continued on page 118)

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— It effectively seals walls and floors against the passage of air, dust and moisture for the life of the building.

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— and because it goes on the building with less labor and less waste. SISALKRAFT costs no more, applied, than flimsy building papers. SISALKRAFT is the one BEST building paper, and it belongs in every home I design.

Give your client a sample of SISALKRAFT to handle. He'll appreciate its obvious quality and protection — and your wisdom in putting it in his home.

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"OLD RELIABLE" at the Lighting Controls

H & H

"8601"

Tumbler Switch

Complete Line

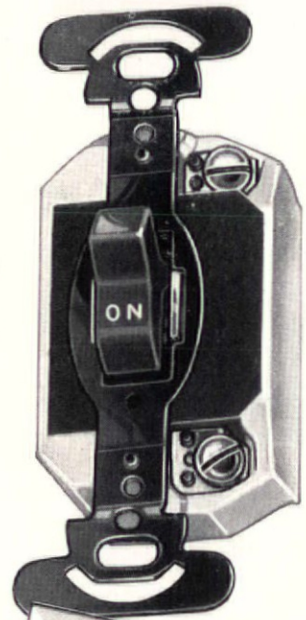
Specification Grade
"T"-rated for Type
C Lamp Loads

No. 8601 — Single-pole
No. 8602 — Double-pole
No. 8603 — Three-way
No. 8604 — Four-way

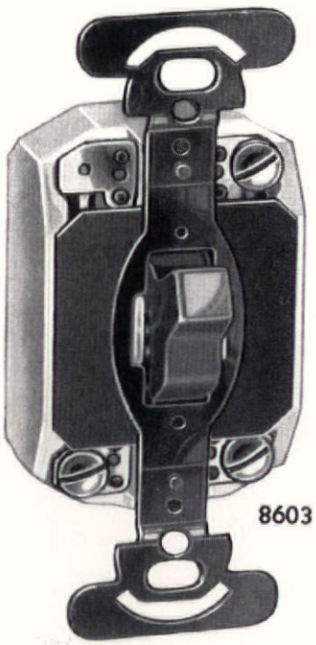
Shallow 1" porcelain base.

Standard brown Bakelite or white Ivorylite handle.

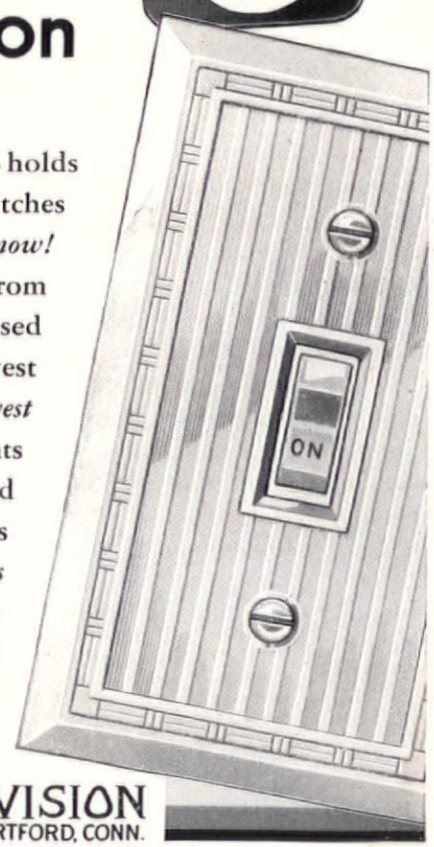
For IVORYLITE, add "I" to Catalog numbers and specify H & H Ivorylite Plates (in standard Uniline design).



Rugged Dependability
for more than a generation

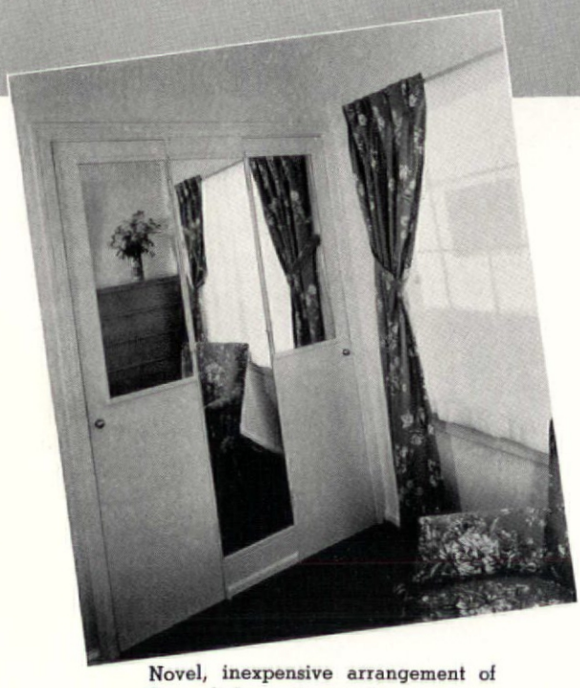


"OLD RELIABLE" — Number 8601 — holds *Number* 1 *rank* among Tumbler Switches with Architects and Engineers who *know!* Mechanically and electrically, so *right* from the start that no later switch has surpassed it for lasting service. As new as the newest in smooth operation; *newer than the newest* in long-term VALUE... No replacements are ahead of you when you put "Old Reliable" at the lighting controls. By its balanced action and rugged parts, it *stays* on your jobs; keeps them functioning smoothly. Its quality supports good work; identifies good wiring.



HART & HEGEMAN DIVISION
THE ARROW-HART & HEGEMAN ELECTRIC CO. HARTFORD, CONN.

The Nation's Eyes are Turning



Novel, inexpensive arrangement of 3-panel door mirrors give women a feature they "have always wanted."

Built-in wall mirrors of polished plate glass make rooms "seem" larger.

The "Design for Happiness" program is helping Operative Builders erect more houses, sell them faster, and make more profit!

"Design for Happiness" is opening up a new market for highly salable low-cost homes, by emphasizing:—good architecture; quality material; good workmanship; sound financing; and greater livability through the wider use of glass.

Faster sales result through the "eye appeal" and utility of glass features formerly limited to higher-priced houses. Rooms seem larger, gay color cheers bathroom and kitchen, homes are brighter, more livable, easier and more economical to maintain. Home buyers want houses with features like these. Now they can have them at prices they can afford.

Backed by consistent national advertising, publicity and promotion, the program gives you for the first time, a nationally advertised home to sell. The program has demonstrated its ability to get wide publicity while homes are under construction, and attract thousands of prospective home buyers. You cash in on a ready-made market!

Builders all over the country are tying their sales plans into this organized effort to offer greater value in small houses. We invite other builders to join the program. Let us help you increase your sales and profits by putting families into these well-designed, well-constructed, highly livable homes. Write Dept. AF441, Libbey·Owens·Ford Glass Co., Toledo, Ohio.

LIBBEY·OWENS·FORD

to this *New Kind* of House

Vitrolite (wall glass) adds gay color that never fades. It cleans with the wipe of a damp cloth.

Storm windows reduce draughts, make homes more comfortable, reduce heating costs up to 30%.

Architects interested in Residential Construction find "Design for Happiness" stimulates home building in all price classes.

The "Design for Happiness" program is creating widespread interest in homes that provide:

1. good architecture
2. quality materials
3. good construction
4. sound financing and
5. more enjoyable homes through the wider use of glass.

This program is opening up a new market of home-owner prospects by focusing special attention on the low-cost field—offering low income families truly fine, livable homes at prices they can afford.

Supported by extensive and consistent L·O·F advertising, the program is creating widespread interest in home construction of all price classes. Prospects developed by this publicity, and builders interested in this program, are being referred to their "local" architects for sound design, competent planning, and careful supervision.

Since "Design for Happiness" homes are being built in quantities which offer possibilities comparable to those of large-scale housing projects, this program can be the means of stimulating business for you and your associates. We will be glad to send you information about the glass designs that have been used in "Design for Happiness" projects in many communities.

GLASS COMPANY

LETTERS

(Continued from page 114)

all professional practitioners on the government payroll. It will be practically impossible for ordinary private enterprise in building to compete with government subsidized projects. That can be arithmetically proven because with the increase of tax-exempt or subsidized housing, the other fellows will have to pay not only their own taxes, but those of the subsidized projects.

The simplest approach is apparently too difficult for those who are trying to meddle with the economic affairs of the country. Let them busy themselves with finding ways to provide cheap and easy credit for the man of enterprise. It is well known that City Housing Authorities as well as money lending institutions can procure money at rates from ½ per cent to 1 per cent per annum while the builder is soaked rates of 5 per cent to 7 per cent.

Let them also busy themselves with having reasonable union rules established so that the public may be represented in eliminating jurisdictional disputes and unreasonable regulations. At present in government housing, the government underwrites the union rule book no matter what it is by prescribing that all union regulations and pay in a district must be adhered to. The union rule book becomes the law of the United States. This need only be stated to indicate how absurd a place we would have to live in if every organization would make similar rules.

JACOB MARK

Brooklyn, N. Y.

Forum:

Your article on Defense Housing:

First—The Post Office boys had the contact. Johnny on the spot.

Second—Once in—they proposed, for instance Bridgeport, cement block row houses, central heating plant.

Bridgeport's Mayor McLevy has just returned from Washington where he protested against this type as it could not be disposed of to individuals after the war. He wants individual houses. They had a successful experience in the World War with individual houses; Crane Development—still salable because of its charm.

Third—Experience re. $2,000-$3,000 houses. Rows and rows of characterless boxes as you illustrate in FORUM are not the last word yet. It is not the house that needs brilliant design, it is group design first, after—good individual units.

We might as well realize Bureau Architects are gradually cornering all large government work.

CAMERON CLARK

New York, N. Y.

Forum:

. . . I concur in your viewpoint 100 per cent. The entire "setup" of Government housing as applied to our locality is, in my opinion, very poorly handled. The condition under which local architects function on this type of housing is bad. The conditions are such that the press is constantly after the local housing group with the result that the impression of local architects, by the public, is unhealthy. The responsibility for this condition, in my humble opinion, can be laid at the door of those who created the conditions and the organization under which the local architects are forced to function. I am in a position to speak quite frankly, because while I am not connected in any way with Government housing, I acted as an arbitrator which gave me an insight into the entire set up.

My rather long expericene of better than fifty years indicates that the demountable house has existed in men's imaginations for that time, and while I have seen many such attempts, the best two days ago, I have not yet seen one of such promise as to indicate national use. So if the gentleman is looking for such, he is, in my humble opinion, looking for rainbows. Wishful thinking will not provide quick defense housing.

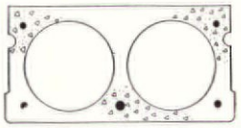
The problem is, of course, economic. Number of man hours plus price per hour, with a deflation in construction standards. Housing people have already deflated design so even intelligence, which you get for nothing today, is missing.

GRANT A. C. BEHEE

Newark, N. J.

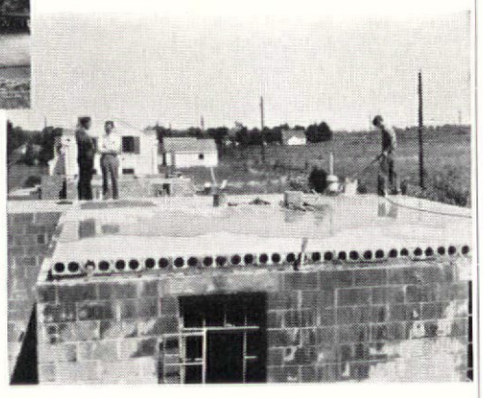
(Continued on page 120)

FLEXICORE



REINFORCED CONCRETE

FLOOR AND ROOF SLABS



Above is an unretouched photograph of a FLEXICORE ceiling.

At right is a construction view showing FLEXICORE slabs in a small house.

The small house can now afford

the same fire-safe, permanent construction as a skyscraper. Flexicore Floor and Roof Slabs wrought this revolutionary change.

- Beautiful Finished Ceiling — Plaster is Eliminated.
- Long Spans — Up to 22 feet.
- Designed for Live Loads up to 200 lbs. p. s. f.
- PRESTRESSED Steel Reinforcement.
- Termite and Vermin Proof.
- Quiet, Warm and Clean.
- Light Weight.
- Applicable to All Types of Residential, Apartment, Commercial, Agricultural and Industrial Buildings.
- Speeds Construction.

A complete list of concrete products manufacturers producing Flexicore Floor and Roof Slabs in the United States will be furnished upon request.

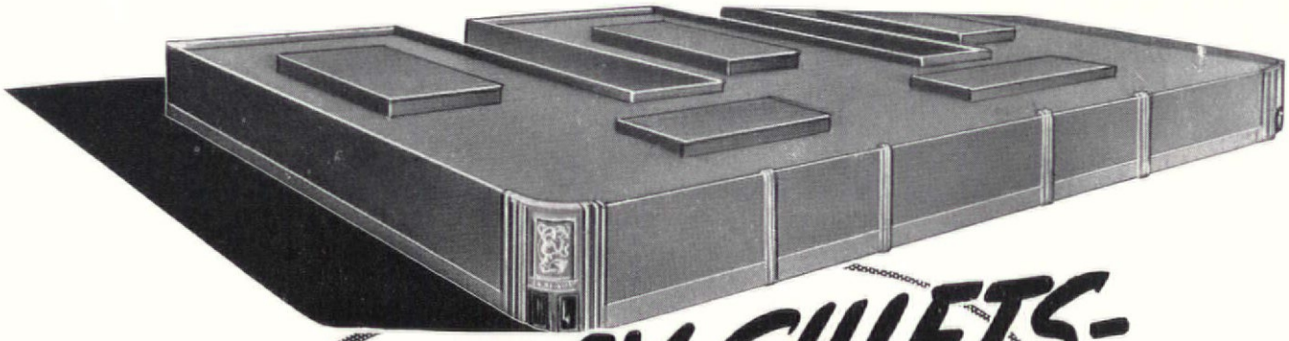
PRICE BROS. CO.
1932 E. Monument Ave.
DAYTON, OHIO

Price Bros. Co.
1932 E. Monument Ave.
Dayton, Ohio
Please send me your new FLEXICORE booklet.

Name .....

Company .....

City ..... *State* .....



3 DAY SHIFTS— each 24 hours!

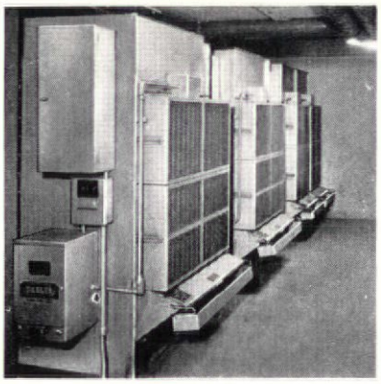
IN AMERICA'S NEW WINDOWLESS FACTORIES

Back in 1930 when "Black-out" was just a theatrical term, American industry was already beginning to move into blacked-out windowless factories.

Of the many problems presented by this innovation, one of the most important was the control of dust — both atmospheric and process — for, without dust control, the ideal working conditions for which this type of factory construction was designed, could not be obtained.

American Air filters and dust control equipment were installed in America's first windowless factories, and within the decade, hundreds of similar installations have performed with uninterrupted efficiency to keep the air within these buildings cleaner than the air found out of doors. Thus, every shift of workers in America's great "blacked-out" factories enters a new world of comfort and high production efficiency — thanks to cleaned air.

The American Electro-Matic filter offers a timely solution to the many new air cleaning problems introduced by the spread of the windowless factory to industries where the control of oil vapors and welding fumes present a difficult problem.



A typical Electro-Matic air filter installation in a large Eastern Industrial plant. Please write for Bulletin No. 250C.
AMERICAN AIR FILTER CO., INC.,
192 Central Ave., Louisville, Ky.

The Electro-Matic Filter which collects air borne dust, soot, smoke, oil vapors and welding *electrically* is the outstanding air cleaning development of the decade. How it works, construction blueprints, efficiency tables, and the interesting story behind its development and application are given in the Electro-Matic bulletin No. 250C. A copy will be sent you free, without obligation.

Cleaned Air AAF *Makes it Possible*

LETTERS

(Continued from page 118)

Forum:

I read with pleasure THE FORUM's article on the subject of private architects in the Defense Housing Program in the March issue, and I sincerely believe the work you are doing in this direction is one of the most beneficial steps taken in the interest of the private practitioner.

Through the medium of THE FORUM, I really believe we have a voice that is tremendously far-reaching, and there can be no question but that your policy of eliminating the "Sugar-Coating" to provide a proper solution of the problem and to attain the desired end is the proper one.

It is with a great deal of pleasure that I extend my sincere thanks to you for the very splendid work you are doing in this direction.

SIDNEY L. STRAUSS

New York, N. Y.

Forum:

I think the architectural profession owes you a great debt of gratitude for going to the "front" for them in this emergency.

We architects, who have for the past few years specialized in housing of all types from the small single-family house through the garden apartment types up to and including the modern fireproof multiple dwellings, have learned a great deal about house planning, costs, location, and also the financing of the various types of housing.

There is no doubt that you are correct in your statement that the government, in this extreme emergency, should take advantage of this type of experience which I am sure could be found throughout all sections of the country.

WILLIAM M. DOWLING

New York, N. Y.

Forum:

. . . We think you have put your finger unerringly on the source of trouble, and surely hope something may be evolved as a correct solution.

WILLIAM J. SAYWARD

Sayward & Logan
Atlanta, Ga.

Forum:

. . . I do not agree with the January remarks of the "Federal Architect" saying that it is unpatriotic to criticize the housing, and particularly the army housing, progress. In that swamp of bureaucracy at Washington it is probably difficult to get anything, but the attitude of the administration through its agencies of opposing the private architect as much as possible, has brought its own reward in delay and poor design.

I am utterly against the "demountable" idea. Millions have been spent in playing with this idea and millions have been lost. To begin to fiddle with it again in this period of emergency is silly, but probably the bureaucrats and army people have got to have it proved to them all over again, as it has been proved to so many others long ago. Some time the demountable house will be a fact, but it cannot be done in the next year or two, and that is what should be thought of at the present time. . . .

PHILIP GOODWIN

New York, N. Y.

Forum:

. . . Many people have been concerned in recent months over the shoddy quality and unexpectedly high cost of much of this defense housing construction. Until I saw your letters, it had not occurred to me that some of this trouble might have been avoided through the retention of competent private architects in the first place.

You should certainly get the acclaim of the profession and the endorsement of other citizens in this constructive effort to speed the completion, reduce the cost and improve the quality of the new buildings now being put up incident to the nation's defense efforts.

GEORGE DOCK, JR.

New York, N. Y.

New H.B. Smith MILLS "20"

BOILER FOR MEDIUM SIZE HOMES!

A MODERN BOILER DESIGNED EXPRESSLY FOR AUTOMATIC FIRING

To alert architects who have been demanding a boiler capable of meeting the new requirements of today's heating systems, the No. 20 MILLS will prove a *striking revelation in boiler performance.*

The No. 20 MILLS incorporates such space and money saving features as *built-in tankless heater* for domestic hot water and *"sealed tight" flue doors* to preserve combustion results . . . has more all important direct heating surface than any other boiler of comparable size.

Architects with medium size homes now on their boards should make it a point to investigate the possibilities of this new unit.

Just send the coupon below for complete information.

The H. B. SMITH Co., Inc., Westfield, Mass.

Please send me complete information on the *New* MILLS "20" for ☐ Oil Firing ☐ Stoker Firing

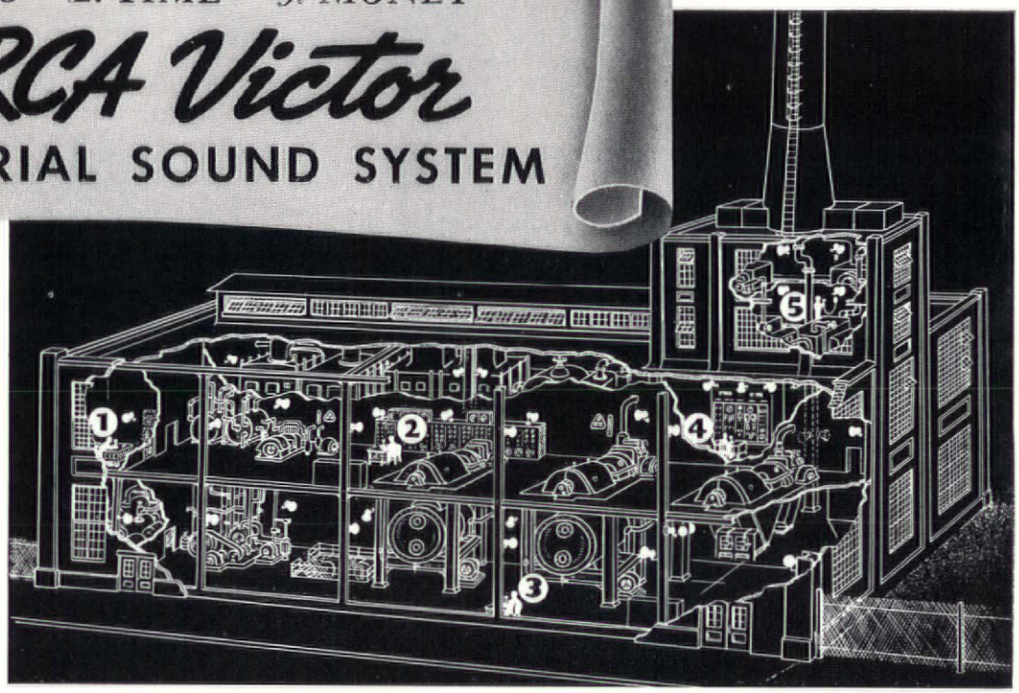
Name.....

Address.....

HOW A MODERN POWER PLANT EFFECTS 3 IMPORTANT SAVINGS

1. *STEPS* 2. *TIME* 3. *MONEY*

With *RCA Victor* INDUSTRIAL SOUND SYSTEM



In a power plant RCA Victor Sound System provides communication with any individual loudspeaker outlet—or all outlets simultaneously. Picture shows (1) Chief Engineer in office at innerphone (2) Switch Operator in Turbine Room (3) Pumpman on pump and filter floors (4) Fireman in Boiler Room (5) Water Tender in Fan and Automatic Regulation Room.

Architects help their clients "up" efficiency, "down" lost motion and expense by specifying this low-cost, high quality industrial equipment that coordinates management, production and man power.

HOW RCA VICTOR Sound System Saves Steps, Time, Money

1. PRODUCTION—Instant communication along production lines, between control positions, between floor and moving cranes, between office and warehouses. Facilitates the orderly movement of raw and finished materials to accumulation points. Intelligible instruction to personnel *above* extreme noise levels in mills, shops and foundries.

2. PERSONNEL RELATIONS—Safety talks . . . Music during lunch and rest periods, and to relieve fatigue . . . Instructive talks to improve efficiency . . . Management talks to entire personnel or separate groups . . . Recreational or social functions.

3. ADMINISTRATIVE CONTROL—Call and paging system to locate executives, key men, and visitors . . . Time, Fire and Safety Signals . . . Instant contact in emergencies.

Trademark "RCA Victor" Reg. U. S. Pat. Off. by RCA Mfg. Co., Inc.

Power plant or hospital; business office or hotel—no matter which holds your interest—here's equipment that renders a real service.

An RCA Victor Industrial Sound System saves in three important ways—steps, time and money. By making possible instantaneous mass communication over large or limited areas, it promotes efficiency and reduces operating expense. Walking and waiting time become profitable *working* time.

Write or send coupon for full details about quality engineered RCA Victor industrial sound systems that are available for any desired number of loudspeaker outlets. If you wish, a specially trained RCA sound engineer will gladly discuss any sound coverage problems with you.

THESE MODERN POWER PLANTS KNOW THE BENEFITS OF AN RCA VICTOR SOUND SYSTEM

Indiana & Michigan Electric Co., Mishawaka, Ind. . . . American Viscose Company, Marcus Hook, Pa. . . . Vineland Municipal Power Co., Vineland, N. J. . . . Diamond Alkali Co., Painesville, Ohio. . . . Philadelphia Electric Co., Philadelphia, Pa. . . . Metropolitan Edison Co., West Reading, Pa. . . . Luken Steel Company, Coatesville, Pa. . . . E. I. DuPont de Nemours Co., Philadelphia, Pa.

We will be glad to supply information concerning scores of other RCA Victor industrial installations.

RCA VICTOR PREFERRED TYPE RADIO TUBES — For Finer Radio Performance

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INDUSTRIAL SOUND SYSTEM
RCA MANUFACTURING COMPANY, INC., CAMDEN, NEW JERSEY
A SERVICE OF THE RADIO CORPORATION OF AMERICA
IN CANADA: RCA VICTOR CO., LTD., MONTREAL

Commercial Sound Division (AF-4)
RCA Manufacturing Co., Inc., Camden, N. J.

Please send me folder (Form 152509) describing RCA Victor Industrial Sound System.

*Name*_____

*Address*_____

*City*_____ *State*_____

FORUM OF EVENTS

AWARDS

To KENNETH J. BREHM and DONALD H. NEWMAN, duplicate gold medals in the eighth annual Hamlin prize sketch competition among third and fourth year students of the Columbia University School of Architecture. The sketches tying for first place presented plans for remodeling Greeley Square in New York City.

To VINCENT W. SEEBACH of New York University, an award of $200 as the first prize winner in the Annual Students' Bridge Design Competition, held under the auspices of the American Institute of Steel Construction. The second prize of $100 went to R. KENNETH KENDALL, the third prize of $50 to M. R. HARRISON, JR., both of Iowa State College.

To ALBERT GICK and NICK CALABRESE, one-year scholarships in Pratt Institute, Brooklyn, N. Y., for submitting the best work in the National High School Art Exhibition. Additional scholarships were awarded to ARTHUR BRENNER and LOUISE POKERN.

The NEW

Burnham

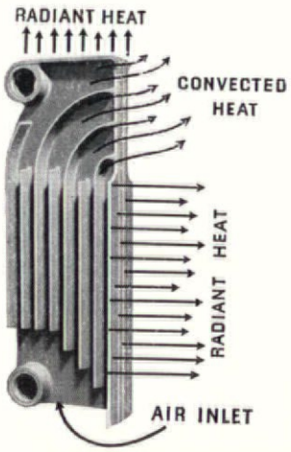
TWO-WAY Heat

FROM A

ONE-WAY Source

You know, as well as we do, that any warm air system, regardless of being fan pushed or what not, furnishes only a *one-way* convected heat.
The heat that rises, and must first heat the top of a room and work down.
But do you know — or have you forgotten — that only from radiators can you have a *two-way* heat?
One, the radiant heat of which, heats the bottom of the room, keeping floors warm; and the convected heat, warming the top. The two unite, forming a quick acting, *always-in-balance* heating.
This New Burnham cabinet type Radiant Radiator, is a decided radiator heat improvement, well worthy of your consideration.
Send for catalog.

See Sweet's. See for yourself.



Burnham Boiler Corporation

Irvington, N. Y.—Dept. J Zanesville, Ohio—Dept. J

Representatives in All Principal Cities of the United States and Canada

COMPETITIONS

The New York Chapter of THE AMERICAN INSTITUTE OF ARCHITECTS announces the second annual competition for the $1,200 Arnold W. Brunner Scholarship. Awarded for "the pursuit of advanced study in some special field of architectural investigation to be selected by the candidate," the competition is open to any U. S. citizen engaged in the profession of architecture. Applications will be received at the Chapter headquarters, 115 East 40 Street, New York City, until April 15. The winner will be announced after June 1.

EDUCATIONAL

THE UNIVERSITY OF ILLINOIS announces the tenth annual consideration of candidates for the Kate Neal Kinley Memorial Fellowship, yielding the sum of $1,000 for a year's advanced study of the fine arts in America or abroad. Applications will be received up to May 15. Requests for application blanks and additional information may be addressed to Dean Rexford Newcomb, College of Fine and Applied Arts, Room 110, Architecture Building, University of Illinois.

THE UNIVERSITY OF MICHIGAN College of Architecture announces that the George G. Booth Traveling Fellowship in Architecture will be offered again this year. The competition in design will be conducted during the two weeks beginning April 11. Prospective candidates should write to the College of Architecture, University of Michigan, for additional information.

One $400 and four $200 first-year scholarships in Architecture will be granted by the College of Fine Arts, SYRACUSE UNIVERSITY, for the school year, 1941-1942. Applications for the scholarships must be submitted by June 26 and competitions will be held on July 12, 1941. All correspondence regarding competitions should be addressed to Dean H. L. Butler, College of Fine Arts, Syracuse, N. Y.

THE PENNSYLVANIA STATE COLLEGE announces the establishment of the Ellen H. Richards Institute to study improvements in standards of living in the field of foods, textiles and shelter. Investigations of the suitability of new materials for the construction of houses and of the performance of various new types of household equipment will be carried on by the newly created Institute.

Three visiting faculty members have been added to the staff of THE UNIVERSITY OF SOUTHERN CALIFORNIA, for the first term of the summer session. Harwell Hamilton Harris, designer, will offer classes in architectural design; Dr. Dimitris Tselos will give courses in modern architecture and allied subjects; Rexford E. Brandt will teach drawing and painting.

(Continued on page 126)

Do You Hire Three Different Tailors to Make Your Coat, Vest and Pants?

Of course not. Yet these busy days architects and builders are taking time out to see several electrical equipment salesmen when they could easily obtain everything from a single, well-equipped source.

That's the whole aim of Westinghouse Clearing House Service—to make available to you without fuss or bother, all the essential data you need in connection with the electrical end of a job.

Instead of one man calling on you regarding switches, another about motors, and still another about lighting or air conditioning, you see regularly only one Westinghouse representative. Into his lap you can lump all your electrical problems.

Behind him are the full resources of the Westinghouse Clearing House. Which means that our man can call into the picture on a minute's notice the various specialists your job may require.

All the data is assembled at a central point. Everything is tied up in a single package. And you are saved hours of time interviewing salesmen and chasing down working material.

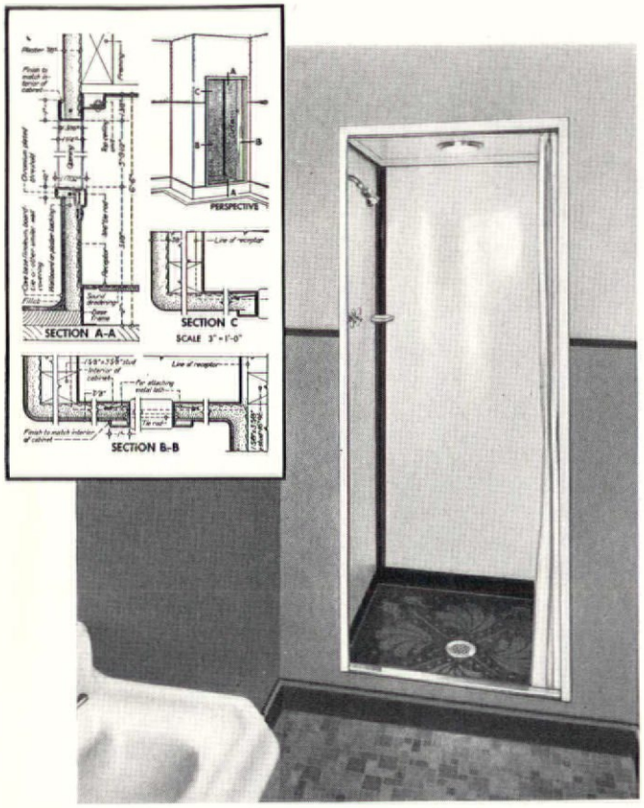
Maybe it all sounds too good to be true. But you'll be well convinced the first time you call the nearest Westinghouse local office and ask for Clearing House Service.

Westinghouse

CLEARING HOUSE SERVICE

FOR ARCHITECTS AND BUILDERS

How to Build
WEISWAYS INTO WALLS
with Entrance Adapters



● Weisway's *guaranteed leakproof* construction may easily be combined with genuine "built-in" beauty by the use of the Weisway Entrance Adapter Cabinet Shower. (Standard model illustrated.) The stiles are an integral part of the cabinet sidewalls, and with the header are finished in high temperature baked enamel to match interior of the cabinet. Concealed surfaces treated with durable, effective sound-deadening material. May be used with glass door, or curtain, as preferred.

While thus giving the attractive appearance of a built-in installation the Weisway structure itself is not affected by settling or shrinkage of surrounding wall and floor materials. With the Foot-Grip, No-Slip floor of vitreous porcelain, in attractive sea-shell pattern, Weisways are the most practical and dependable as well as the most effective solution of the shower bath problem in homes, clubs, institutions or industrials buildings.

Mail coupon for catalog and detail drawings.

WEISWAY *Cabinet Showers*

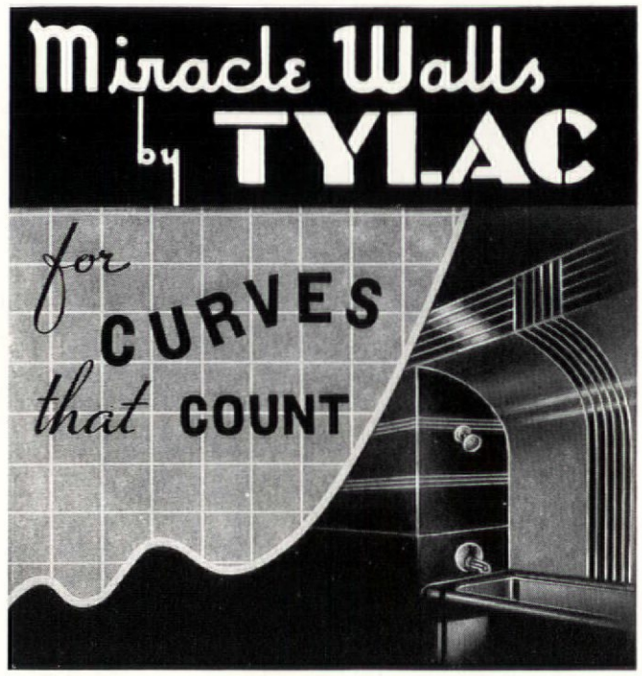
HENRY WEIS MFG. CO. (Est. 1876)
402 Oak St., Elkhart, Ind.

Without obligation please send details and specifications on Weisway Entrance Adapter Model Cabinet Showers.

Name_____

Street_____

City_____ State_____

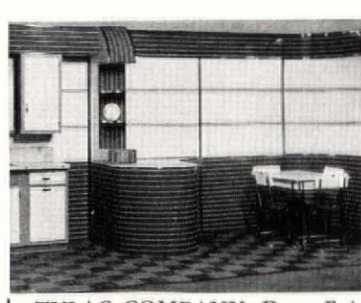


Beautifully curved, lustrous streamlined interiors of TYLAC result in an upward curve in the sale of homes. The distinctive touch provided by TYLAC in a home is "Showmanship" that closes the sale. In bath and kitchen, the two key points of interest to the prospective buyer, TYLAC gives appealing color and a wall surface that requires only simple washing to keep clean.

TYLAC gives the architect abundant latitude in designing—satisfying individual tastes in new homes and remodeling jobs. Easily adapted to the budget, TYLAC costs but little more than plaster and the initial decorating. TYLAC is PERMANENT, eliminating all future decorating costs.

TYLAC is equally well adapted to commercial interiors. The smart elegance which it provides attracts trade and helps the upward curve of retail sales.

Get full particulars now on this distinctive, lustrous wall covering for kitchens, bathrooms, play rooms, or for restaurants, stores, offices, hospitals, lounges—any interior where beauty, permanence and economy are prime factors.



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FORUM OF EVENTS

(Continued from page 122)

CALENDAR

May 8-9. Fourth Annual Anthracite Conference, Lehigh University, Bethlehem, Pa.

May 17-19. Seventy-third annual convention of the American Institute of Architects, in the Yosemite Valley, California.

May 27-28. Meeting of the National Board of Fire Underwriters, commemorating the seventy-fifth anniversary of its founding, at the Waldorf-Astoria Hotel, New York City.

June 16-20. Pacific Heating & Air Conditioning Exposition, to be held in the Exposition Auditorium, San Francisco. The Exposition, under the auspices of the American Society of Heating & Ventilating Engineers, is to be held in conjunction with the summer meeting of that Society.

DIED

WILLIAM P. KATZ, 53, architect, in Yonkers, N. Y. A native of Yonkers, Mr. Katz attended Columbia University, Cooper Union and the National Academy of Design. During the war, he designed and supervised construction for the War Department at the Presidio of San Francisco, Army Headquarters in California, and on the Mexican border. An associate architect of the Mulford Gardens project in Yonkers, he also designed the First National Bank Building, the Yonkers Health Center, Public School 24, the 3rd Precinct Police Station and the Park Building in that city.

DR. MICHAEL MIKKELSEN, 75, in New York. Born in Wisconsin, he attended the public schools of that state and received a Doctorate in Philosophy at Johns Hopkins University. After studying for the ministry, he joined the staff of The Architectural Record in New York and later became its editor. He had been a vice president of the F. W. Dodge Corporation and a vice president and director of the Real Estate Directory Company, Inc.

GEORGE F. DRISCOLL, 69, contractor, at Brooklyn, N. Y. Born in Brooklyn, he began work as an apprentice bricklayer when he was eleven years old. His firm, the George F. Driscoll Company, founded in 1901, has just been named to work jointly with the Walsh Construction Company on the new Army base at Trinidad, British West Indies. It is also presently at work on the construction of the Federal Office Building at Arlington, Va. Among the structures built by the company in New York City are the Abraham Lincoln, John Adams, Grover Cleveland and Andrew Jackson High Schools, the Bronx County jail, Kings County Nurses Home, the Jamaica Sewage Treatment Works, the New York Parcel Post Building, and the Canal Street post office. The firm also built several sections of the West Side Highway and more recently was engaged in construction of the East River housing development.

ADMIRAL CHRISTIAN JOY PEOPLES, 64, in Washington, D. C. Admiral Peoples, who retired from the Navy on November 1, after forty years of service, was regarded for many years as the Navy's leading expert on purchase and supplies. A rear admiral in 1917, he won the Navy Cross for "exceptionally meritorious service" for feeding and clothing the Navy during the World War. In 1935, Admiral Peoples was requisitioned to head the Procurement Division of the Treasury Department, which had as one of its major tasks the making of purchases for the $4 billion work relief program. He served as head of the division until 1939. After leaving the Treasury, he was general inspector of the Navy Supply Corps on the Pacific Coast until his retirement. Since November 1, he had been associated with the Todd Shipyards Corporation in Washington. Admiral Peoples developed the purchase system now in use in the Navy and was credited with having standardized the steaming coal and fuel oil system.

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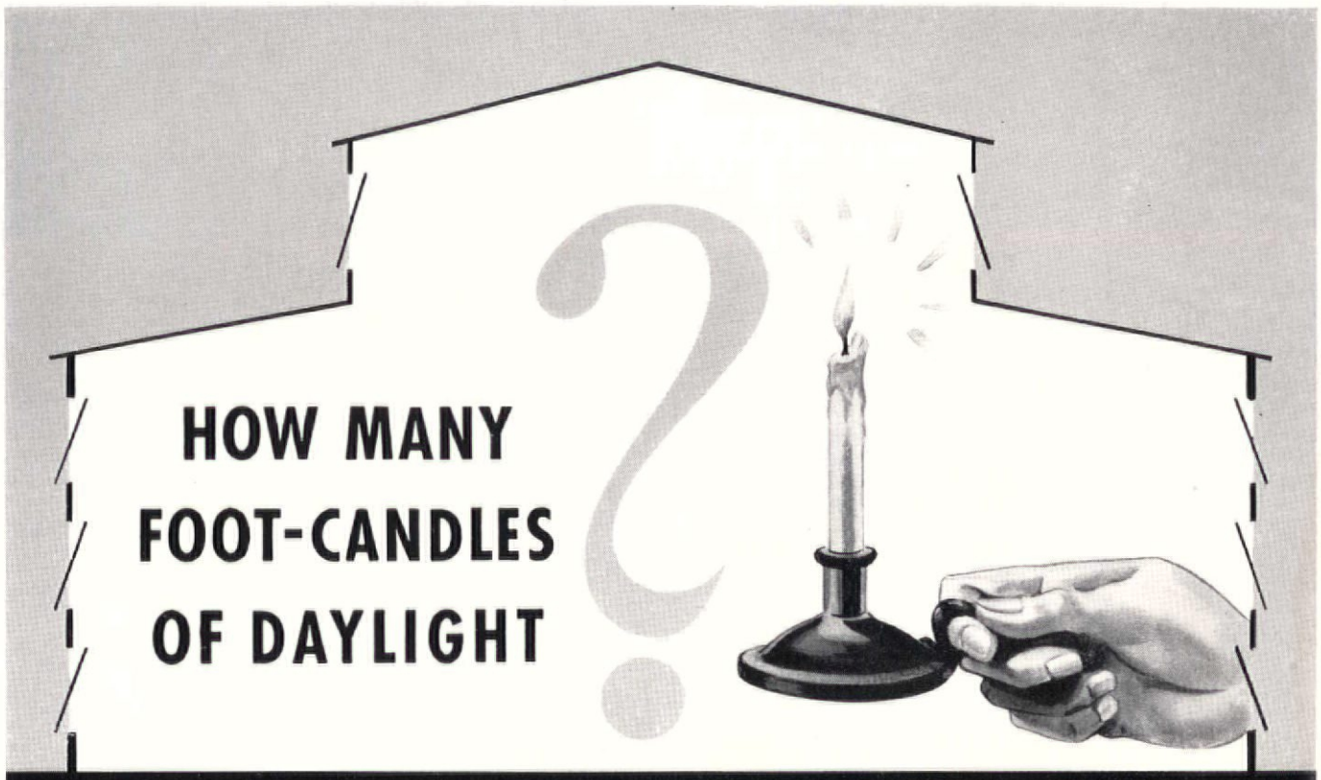

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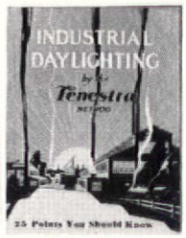

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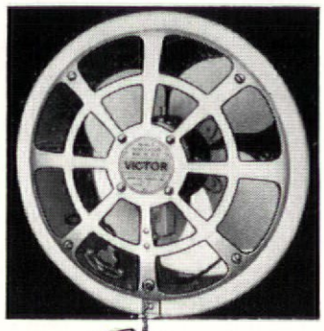

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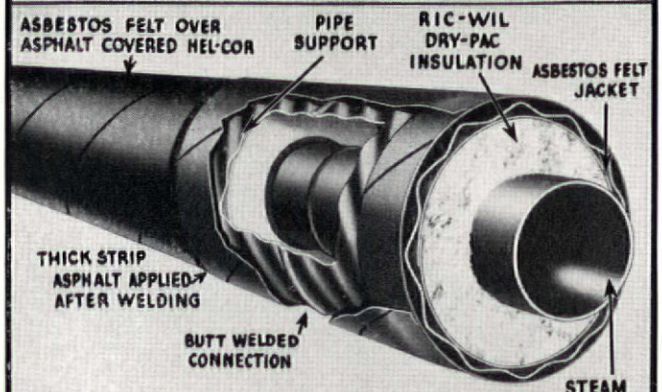

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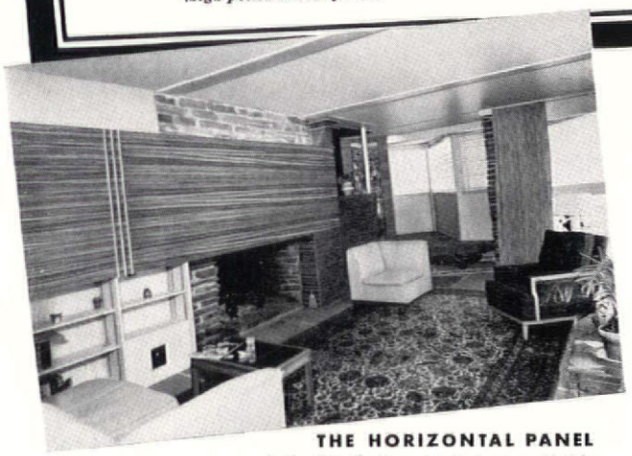

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of Marlite Zebrawood gives a highly distinctive note of styling to this modern living room.
Architect, Arthur A. Hoefler, Jr.

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that will please the most critical client . . . and the price-minded ones, too.

Your problem of creating truly smart interiors to fit the small home budget is greatly simplified by Marlite . . . with its highly distinctive beauty and low cost. Where wall treatments require a highly polished mirror effect, Marlite DELUXE is ideal; where walls with a soft velvet-like sheen are desired, there is the new low priced Marlite VELVETEX.

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(Continued from page 36)

COLORING, FINISHING AND PAINTING WOOD, by A. C. Newell. The Manual Arts Press, Peoria, Ill. 480 pp., illustrated. 6½ x 9¼. $4.50.

The enlarged edition of one of the best manuals on wood finishing. The new section consists of six chapters which deal mainly with the new quick-drying synthetic finishes, give additional information about more efficient methods of bleaching furniture woods, and discuss practical air-drying finishes for metals. For anyone interested in obtaining good wood finishes, whether architect, cabinet maker or painter, the chief value of the book lies in the fact that not only does it give reliable information on proper methods of surface preparation, paint application, etc., but it also goes into the chemical composition of the various materials and their process of manufacture so that the reasons for the instructions given become perfectly clear. These technical descriptions are well gauged to the capacity of the lay reader, and they are neatly packaged so that they may be shipped if desired.

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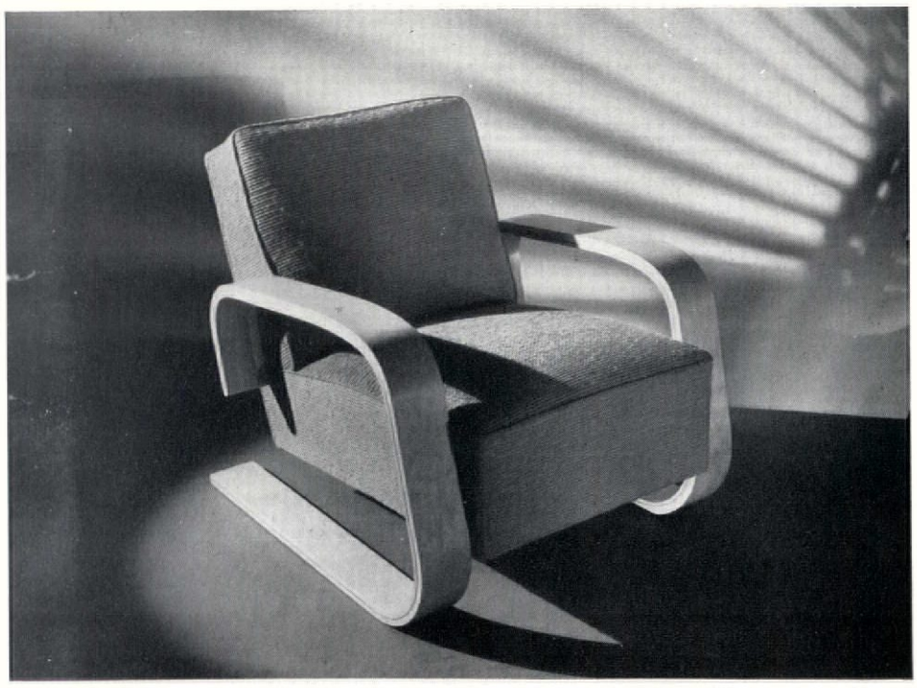

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SIMPLIFIED CARPENTRY ESTIMATING, by J. Douglas Wilson and Clell M. Rogers. Simmons-Boardman Publishing Corp., New York. 204 pp., 4¾ x 7. $2.50.

A brief manual for the carpenter who is occasionally called on to do estimating, and for the contractor who wishes to improve and speed up his own methods of figuring. The information deals only with houses, and includes not only framing, finishes, etc., but forms for concrete work and hardware. A valuable guide for the architect engaged in small house work, as it presents a series of simple methods which can be used in the drafting room to arrive at estimates more accurate than those obtained by using the conventional cubic or square foot calculations.

ARRANGING FLOWERS, by Margaret Watson. The Studio Publications, Inc. New York. 27 photographic illustrations. 6½ x 8½. $1.50.

A simple treatise on the principles and practice of good flower arrangements, presented in the form of twenty-six illustrated

examples with explanatory text. There is a brief introduction dealing with the proper choice of flowers, their care and the available types of containers.

SIMPLIFIED DESIGN OF ROOF TRUSSES FOR ARCHITECTS AND BUILDERS, by Harry Parker. John Wiley & Sons, Inc. 195 pp. 5¼ x 8. $2.75.

This book is the amplification of a chapter in "Simplified Engineering for Architects and Builders" which was brought out by the same author a few years ago. It was designed as an introduction to roof trusses for those who have had no preliminary training in the subject, and has been prepared so that it is equally suitable for home study. There is an initial section on stresses and simple beam design. Those chapters dealing with trusses cover both steel and timber and include actual examples to illustrate the method of designing common types. Recommended for young architects and engineers preparing to take the state board examination.

(Continued on page 134)

Jake's all set to cut your hair - - - paint your portrait - - - or embalm you!

WE knew a fellow once named Jake who could do practically everything. He was a jack-of-all-trades. But somehow Jake never got to be very good at any one thing.

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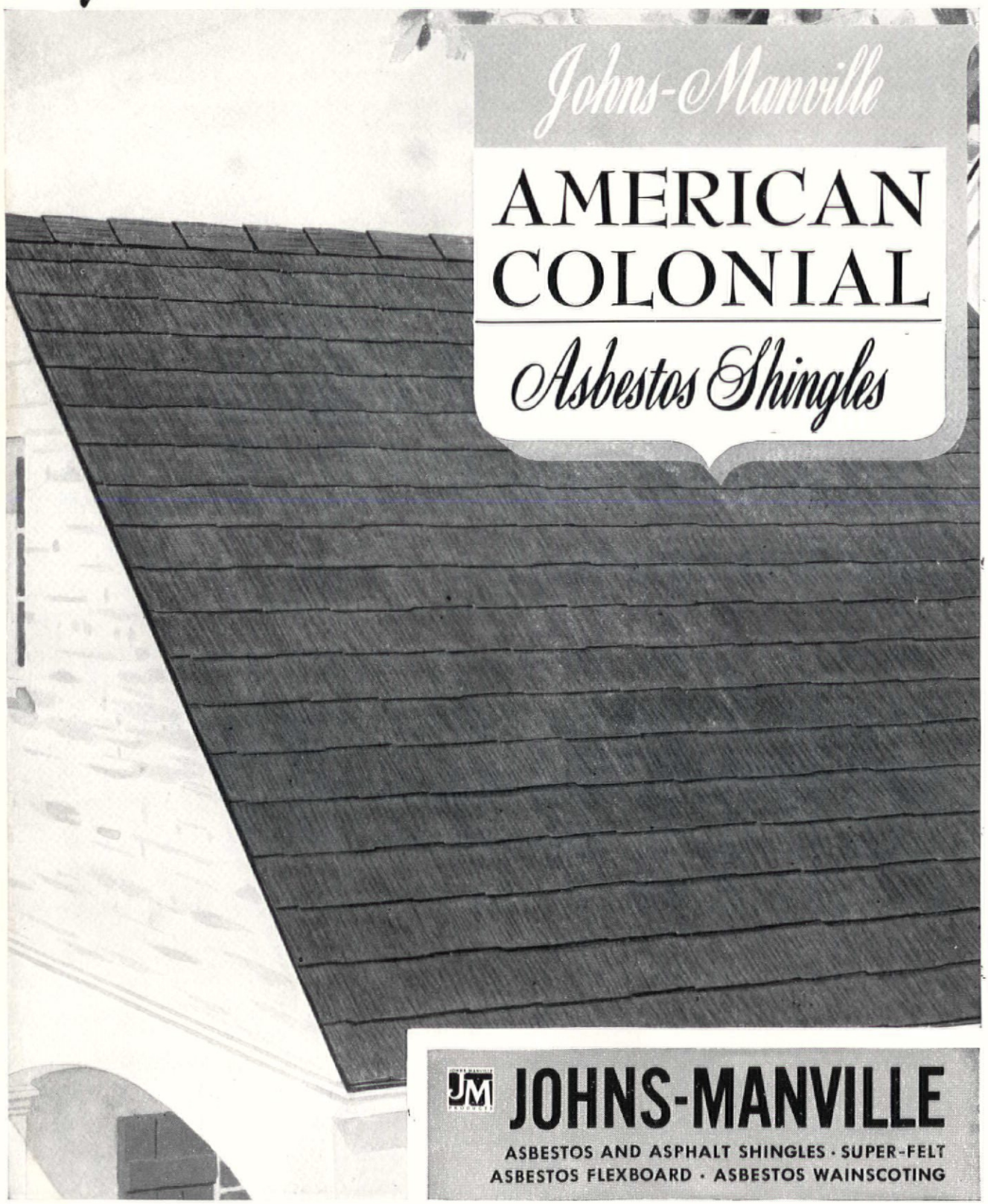
Important Announcement



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And *color!* Handsome blends . . . a soft green, a warm red, a rich black. Also a natural gray and a white.

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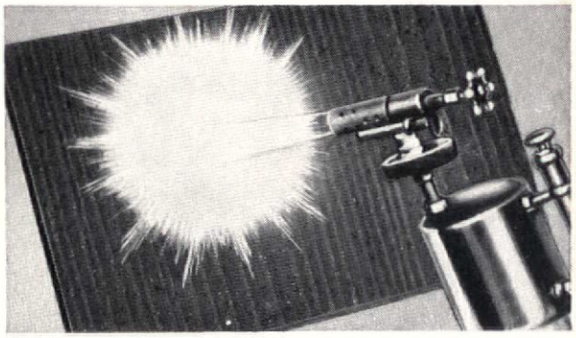
Like all J-M Asbestos Shingles, this new shingle can't burn or rot, is practically impervious to weather. No periodic upkeep is needed . . . no preservative treatment.

Those are the reasons why every client will appreciate your specifying J-M American Colonial Asbestos Shingles. But clients will be particularly grateful as years pass and they learn the economy of having a roof as lasting as the house itself!

BEAUTIFUL . . . You'll really find it hard to believe that the new J-M *American Colonial* Asbestos Shingle is a fabricated material with the permanence of stone. Its texture and graining are those of fine weathered wood. Shadow lines are clean-cut, sharp, interesting. Its dignity of line and simplicity give the roof true American Method appearance!



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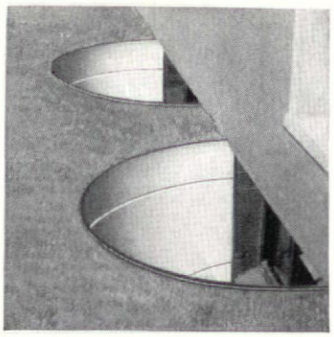
(Continued from page 130)

PRACTICAL JOB POINTERS, by Nelson L. Burbank. Simmons-Boardman Publishing Corporation. 129 pp., illustrated. 8¾ x 11¼. $2.00.

A collection of some 600 ideas on practical building methods, offered to architects, contractors and mechanics as ways of saving time and money. Much of the material is of the gadgeteering variety, such as using the back of a saw as a ruler, salvaging an old pair of suspenders to make a strap to hold a hammer on a carpenter's apron, or the transformation of an old inner tube into a case for a plumb and level. Scattered through the book along with such unimpressive notions are a great number of useful suggestions on the rapid installation or improvement of framing, foundations and concrete forms, interior trim and wall finishes, roofing, etc. Each of the suggestions is illustrated by a line drawing or photograph and is briefly described. Material is organized into about twenty general sections and reference use is further simplified by a complete index.

CUT BUILDING COSTS *these 2 ways*



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Substantial, well-made, these steel attic ventilators are low in first cost and easy to install. In frame construction, all that is necessary is to cut an opening in the sheathing, nail flashing flange to sheathing, butt shingles or side against ventilator body and that's all—no wood trim is required (installation in brick is just as easy).

Complete with bronze fly screen fastened to inside, made of 20 ga. steel, electrically welded, finished with two coats of special paint for double protection. Rectangular shape in 10 sizes up to 18" x 36", also made in half-round and quarter-round shapes.

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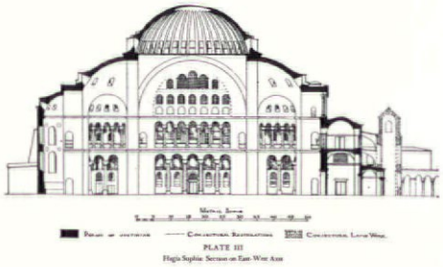
SEVENTY YEARS OF REAL ESTATE SUBDIVIDING IN THE REGION OF CHICAGO, by Helen Corbin Monchow. Northwestern University. 200 pp. 6¼ x 9¼. $2.25.

An examination of subdividing activity in the vicinity of Chicago, with relation to the need for residential sites, the influence of various institutional factors, population growth, general business conditions, and the development of manufacturing and transportation. The main discovery made was that the supply of lots was enormously in excess of the demand, due to the operation of a speculative motive rather than considered planning for actual use. Another factor of importance is the random development of industries, which is reflected in the unplanned character of real estate expansion. Each of the elements mentioned above is discussed in detail, and while the conclusions are far from surprising, the data presented form interesting reading. At the end of this study the author states: "Not only have subdividers speculated on the gullibility, the land hunger, or the desire for profit by the public, but purchasers also have speculated on the tradition of rising land values in the United States and the prospect of an 'unearned increment.' The result of such unrestricted pursuit of profit is haphazard development, economic waste, and the creation of serious problems of public policy. . . . These are the ones against which measures of control must be directed."

HAGIA SOPHIA, by Emerson Howland Swift. Columbia University Press. 265 pp., illustrated with drawings and photographs. 9¼ x 12¼. $10.00.

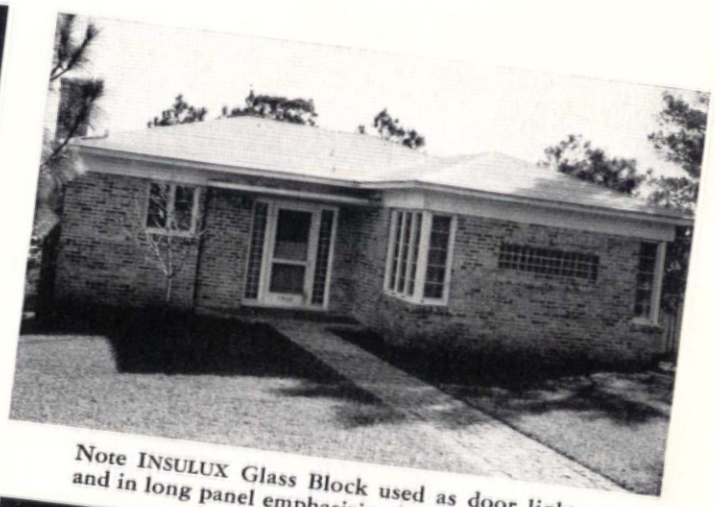
The Church of Hagia Sophia is one of the great architectural monuments of all time, easily ranking with such masterpieces as



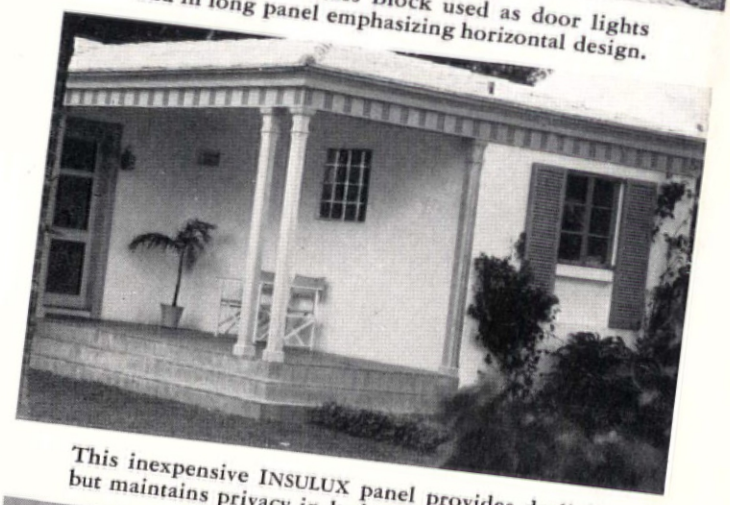
Chartres and the Parthenon. In this handsomely printed monograph of Professor Swift it has received worthy treatment. Every aspect of the building, its structure, history, background, etc., has been comprehensively treated and fully illustrated. Most welcome to the non-archæologically minded reader will be the thoroughly readable text, a far cry from the usual dry assemblage of facts. There is an index, and an excellent bibliography.

Scores of Problems in *Small Home Design* can be solved with OWENS-ILLINOIS INSULUX *Glass Block*

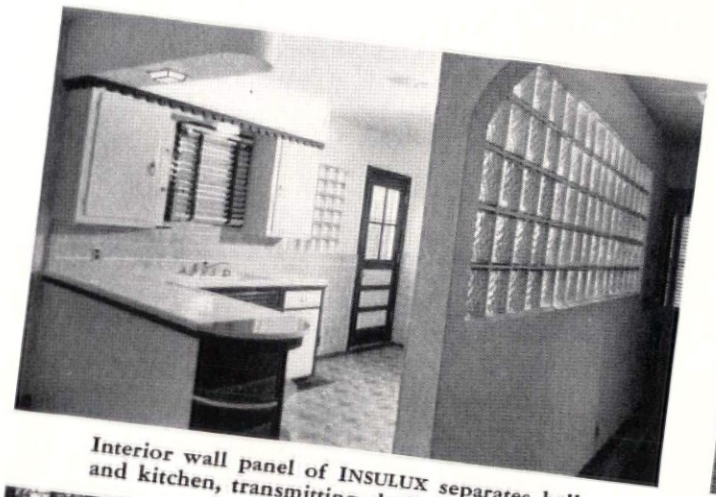
THERE are places in the small home for which INSULUX Glass Block are the logical and economical material. The half-dozen functional and decorative uses shown here indicate the versatility of glass block in the hands of the architect. No other material offers the same combination of advantages: light transmission; high insulation value; privacy; lower sound transmission; freedom of design. The acceptance of INSULUX Glass Block by architects and owners everywhere proves its right to a place in homes of today. Owens-Illinois Glass Company, INSULUX Division, Toledo.



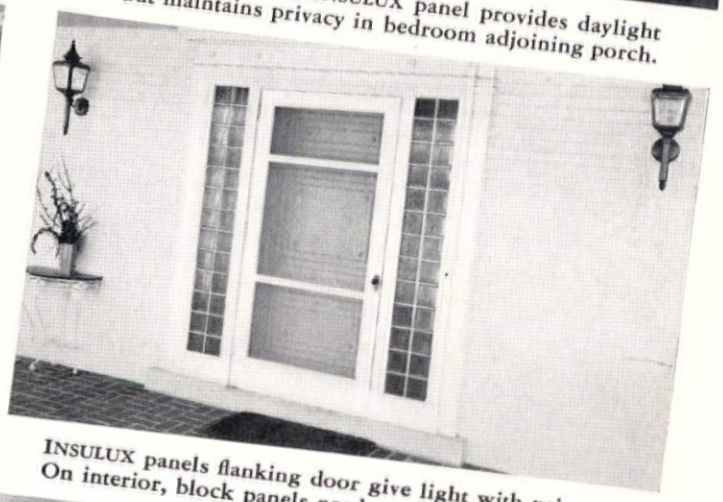
Note INSULUX Glass Block used as door lights and in long panel emphasizing horizontal design.



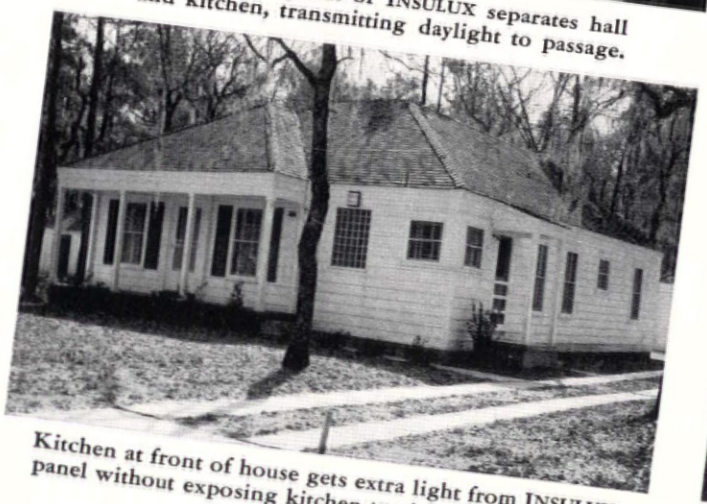
This inexpensive INSULUX panel provides daylight but maintains privacy in bedroom adjoining porch.



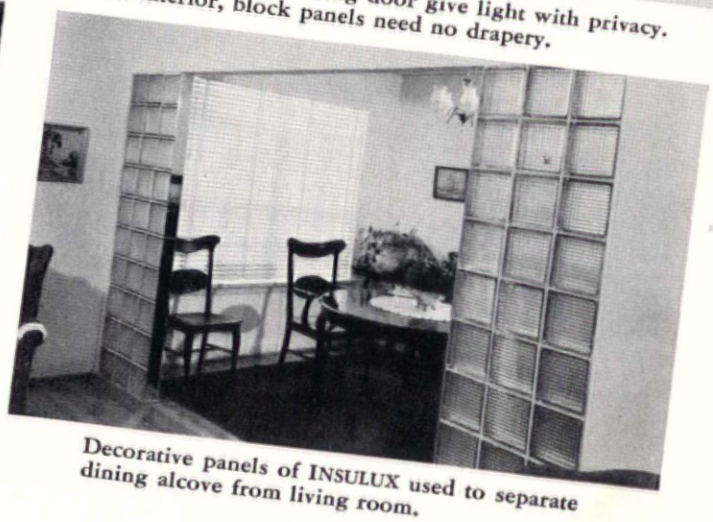
Interior wall panel of INSULUX separates hall and kitchen, transmitting daylight to passage.



INSULUX panels flanking door give light with privacy. On interior, block panels need no drapery.



Kitchen at front of house gets extra light from INSULUX panel without exposing kitchen to visitors.



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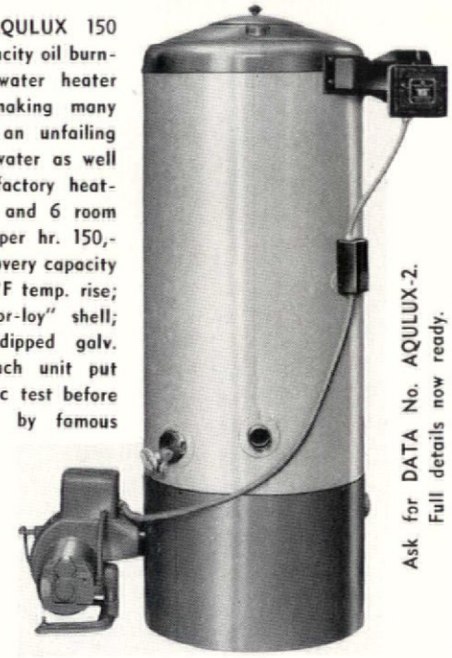

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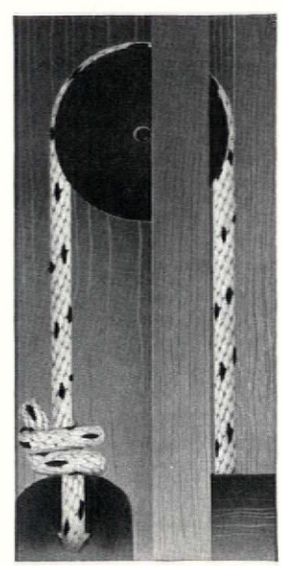

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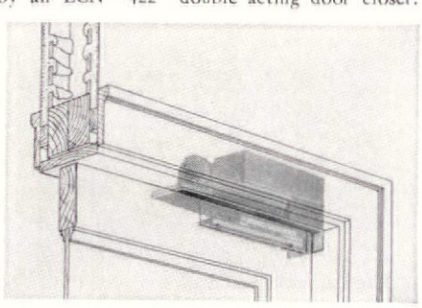

See the LCN Catalog in Sweet's, Section 16-27

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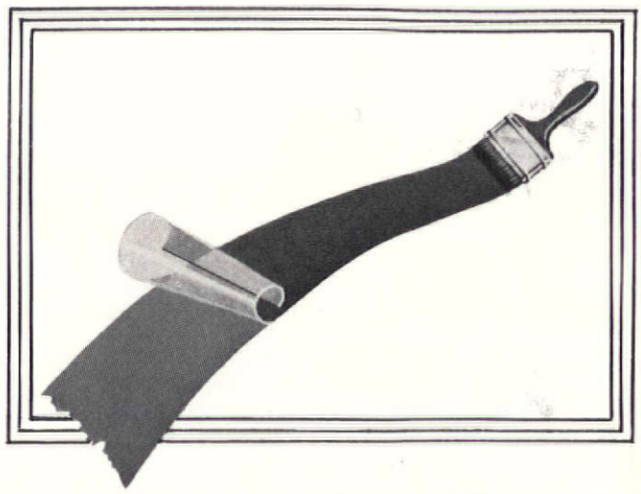

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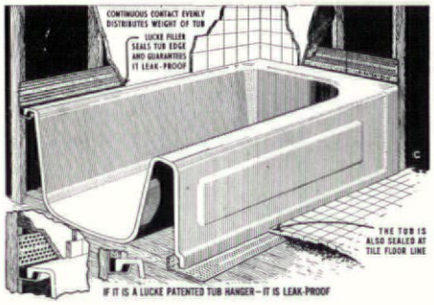

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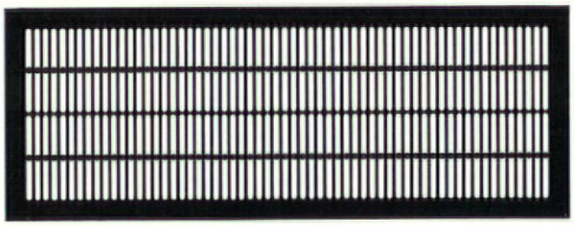

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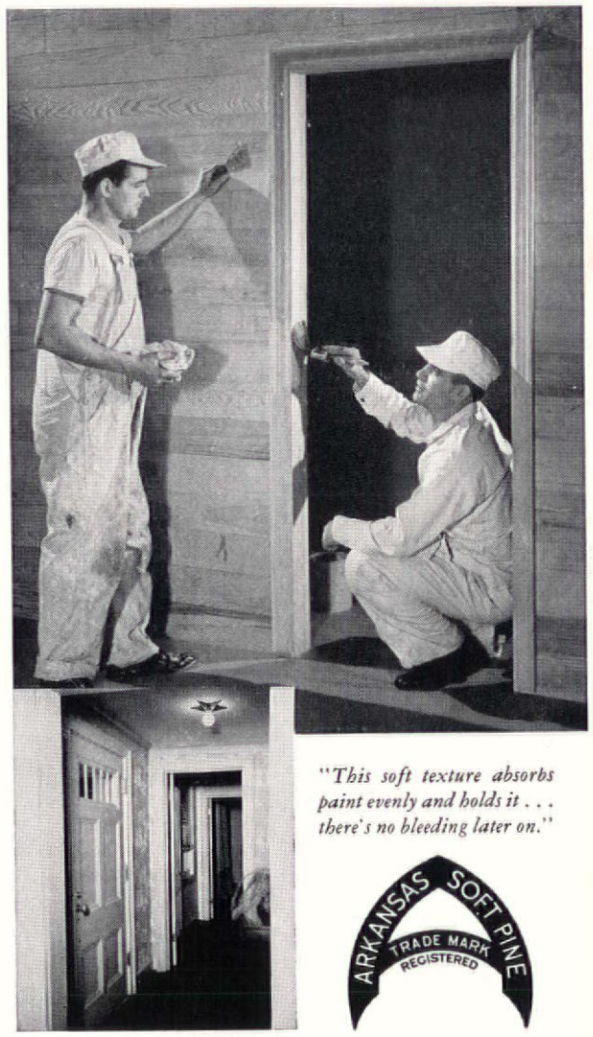

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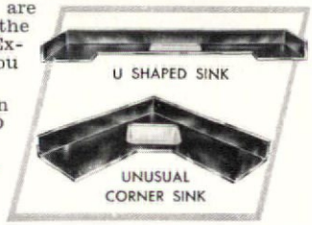

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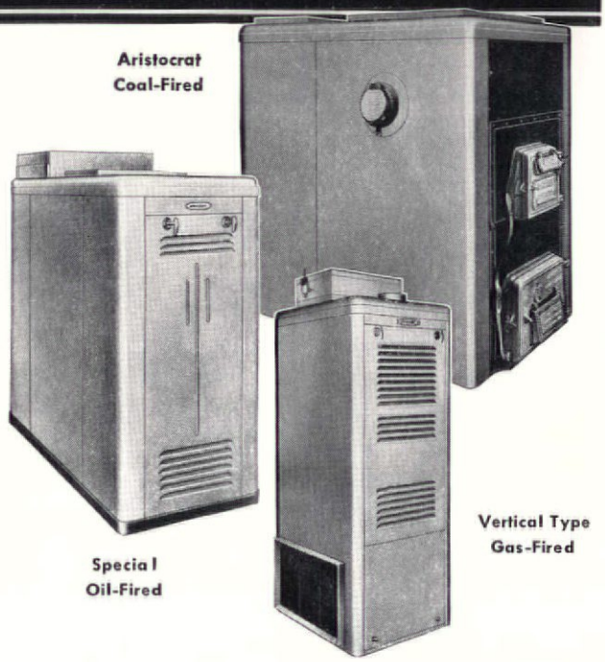

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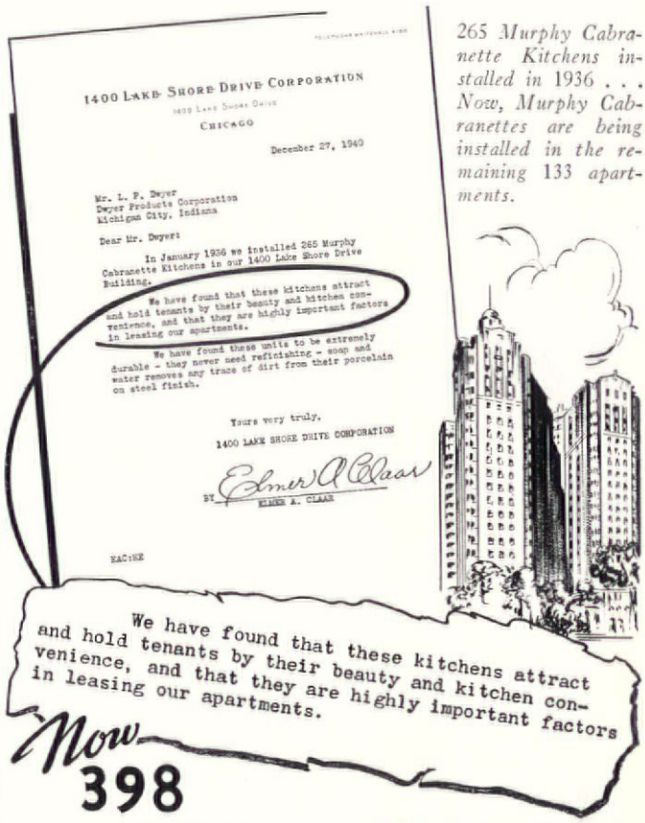
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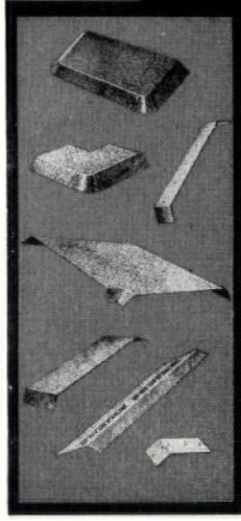

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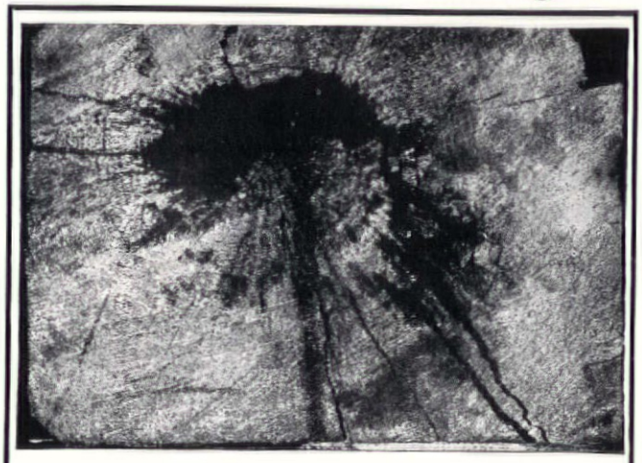

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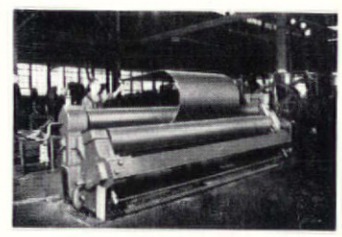

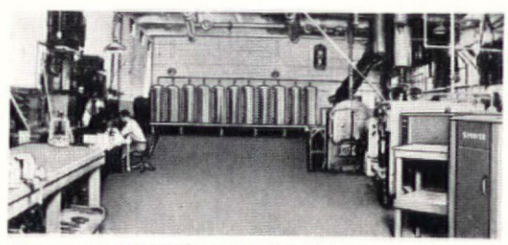

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Adam, Frank Electric Co. ....opp. p. 72
Alberene Stone Corporation of Virginia 63
Aluminum Company of America 24, 25
American Air Filter Co., Inc. 119
American Brass Company, The 59
American Lumber & Treating Co. 60
American Rolling Mill Company, The 30
American Steel & Wire Company 145
(United States Steel Corporation Subsidiary)
American Telephone & Telegraph Co. 92
Anchor Post Fence Company 80
Anderson Corporation 48
Arco Company, The 128
Arkansas Soft Pine Bureau 139
Armstrong Cork Company ....opp. p. 65, 74
Arrow-Hart & Hegeman Electric Co., The 115
Artek-Pascoe Inc. 130
Auer Register Company, The 56

Borg-Warner Corporation 23
(Ingersoll Steel & Disc Division)
Boro Wood Products Co. 140
Bruce Co., E. L. 53
Brunswick-Balke-Collender Co., The 96
Burnham Boiler Corporation 122
Byers, A. M. Company 13

Cabot, Samuel, Inc. 104
California Redwood Association 92
Carey, Philip Company, The 91
Carnegie-Illinois Steel Corporation 145
(United States Steel Corporation Subsidiary)
Case & Son, W. A. Manufacturing Co. 62
Ceco Steel Products Corporation 9
Celotex Corporation, The ....Cover II
Church, C. F., Mfg. Co. 104
Columbia Steel Company 145
(United States Steel Corporation Subsidiary)
Columbus Coated Fabrics Corporation 82
Congoleum-Nairn, Inc. ....opp. p. 73
Consolidated Expanded Metal Companies, The 83
Covert Co., H. W. 140
Crane Co. 46
Curtis Companies 87

Davidson Enamel Products, Inc. 17, 142
Detroit Steel Products Co. 127
Donley Bros. Co. 134
Douglas Fir Plywood Association .... opp. p. 33
Du Pont, E. I. De Nemours & Co., Inc. 143
(Grasselli Chemicals Department)
Dwyer Products Corp. 141

Eagle-Picher Lead Company, The 49
Edison General Electric Appliance Co., Inc. 22, 146
Electro Metallurgical Company 7
Eljer Co. 82

Federal-American Cement Tile Co. 27
Fitzgibbons Boiler Company, Inc. 50
Fleur-O-Lier Manufacturers 69
Flintkote Company, The 54
Formica Insulation Company, The 5
Frigidaire Division 73
(General Motors Sales Corp.)

Gar Wood Industries, Inc. 84
General Electric Company 35, 51, 99, 109
General Motors Sales Corp. 73
(Frigidaire Division)
Goodyear Tire & Rubber Company, The 37
Grasselli Chemicals Department 143
(E. I. Du Pont De Nemours & Co., Inc.)
Grinnell Company, Inc. 38
Gutmann and Company, Inc. 138

Hallenscheid & McDonald 33
Haskelite Manufacturing Corporation 76, 77
Hendrick Manufacturing Co. 138
Henry Furnace & Foundry Company, The 141
Hotstream Heater Company, The 80
(Borg-Warner Corporation)

Ingersoll Steel & Disc Division 23
Ingram-Richardson Manufacturing Co. 19
Insulite Company, The 41
Iron Fireman Manufacturing Company 96

Jenkins Bros. 107
Johns-Manville 85, 132, 133
Johnson, S. T. Co. 136
Johnson Service Company 66

Kaufman & Fabry Co. 140
Kawneer Company, The 11
Keasbey & Mattison Company ....opp. p. 308, 65
Kennedy, David E., Inc. 6
Kimberly-Clark Corporation 57
Kinnear Mfg. Co., The 68

Kitchen Maid Corporation, The 128
Knape & Vogt Manufacturing Co. 138
Kohler Co. 55

Lawson, F. H. Company, The 98
Libbey-Owens-Ford Glass Co. 116, 117
Louisville Cement Co. 8
Lucke, William B., Inc. 138

Marsh Wall Products, Inc. 129
Masonite Corporation 3
Medusa Portland Cement Co. 95
Mengel Co., The 111
Mesker Bros. 61
Miami Cabinet Division 81
(The Philip Carey Company)
Milcor Steel Company 64
Miller Company, The 45
Modine Manufacturing Company 47
Monarch Metal Weatherstrip Corporation 72
Mullins Mfg. Corp. 142
(Youngstown Pressed Steel Division)
Muralo Company, Inc., The 137

National Door Manufacturers' Association 136
National Gypsum Company 131
National Lead Company 58
National Terrazzo and Mosaic Association, The 126
National Tube Company 145
(United States Steel Corporation Subsidiary)
Norton Lasier Company 137

Owens-Illinois Glass Company 135
Overhead Door Corporation .... Cover IV

Pacific Steel Boilers 31
(Division of United States Radiator Corporation)
Paine Lumber Company, Ltd. 28, 29
Parker Rust-Proof Company 97
Payne Furnace & Supply Co., Inc. 94
Pecora Paint Company, Inc. 102
Penberthy Injector Company 15
Philco Radio & Television Corporation 26
Pittsburgh Corning Corporation 108
Pittsburgh Plate Glass Company 71, 78
Pittsburgh Plate Glass Company, Paint Division 93
Ponderosa Pine Woodwork 39
Portland Cement Association 101
Pratt & Lambert, Inc. 42, 43
Price Bros. Co. 118

RCA Manufacturing Co., Inc. 121
Reading Hardware Corporation 75
Red Cedar Shingle Bureau 21
Republic Steel Corporation 103
Revere Copper and Brass, Incorporated 113
Rie-Wil Co., The 128
Richmond Screw Anchor Company, Inc. 90
Rowe Manufacturing Co. 40
Russell, F. C. Company, The 136
Rybolt Heater Co., The 86

Samson Cordage Works 136
Servel, Inc. 67
Shellac Information Bureau 70
Sisalkraft Company, The 114
Smith, H. B. Co., Inc., The 120
Sonneborn Sons Inc., L. 100
Spencer Heaters 143
Stanley Works, The 100
Stewart Iron Works 142
Surface Combustion Corp. 52

Tile Manufacturers Association 32
Tile-Tex Company, The 106
Timber Engineering Company 142
Trane Company, The 105
Trinity Portland Cement Company .... opp. p. 32
Truscon Steel Company .... Cover III
Tylac Company 124

United States Plywood Corporation 125
United States Radiator Corporation 31
(Pacific Steel Boilers Division)
United States Steel Corporation 89, 145
Universal Atlas Cement Co. 89
(United States Steel Corporation Subsidiary)

Van Range, John, Co., The 84
Victor Electric Products, Inc. 128

Weis, Henry Mfg. Co., Inc. 124
Western Shade Cloth Co., The 88
Westinghouse Electric & Manufacturing Co. 123
Weyerhaeuser Sales Company 79
Wiremold Company, The 112
Wood Conversion Company 34

York Ice Machinery Corporation 110
Youngstown Pressed Steel Division 142
(Mullins Mfg. Corp.)

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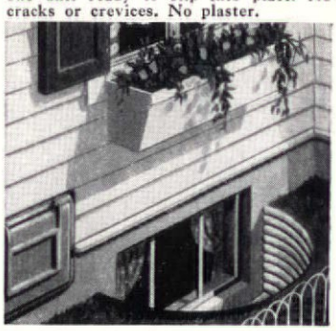

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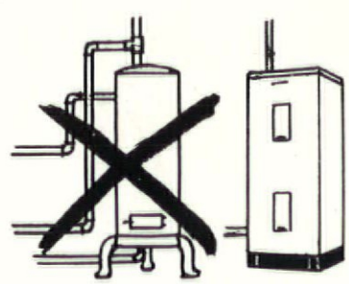

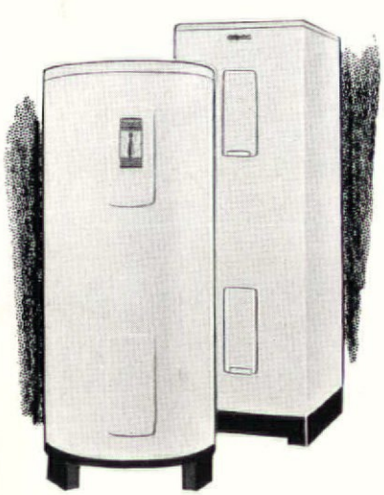

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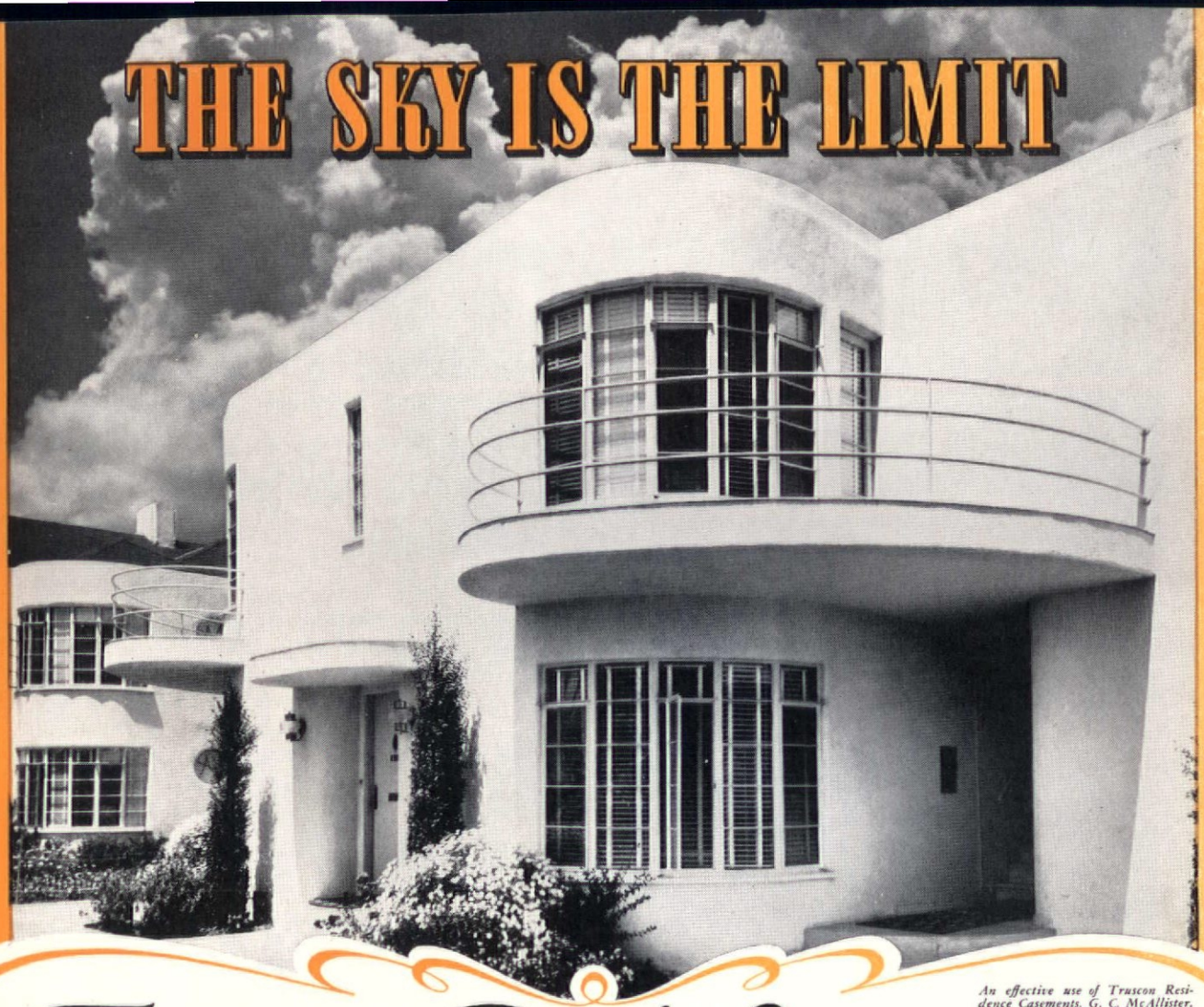

An effective use of Truscon Residence Casements. G. C. McAllister, Architect, Santa Monica, California.

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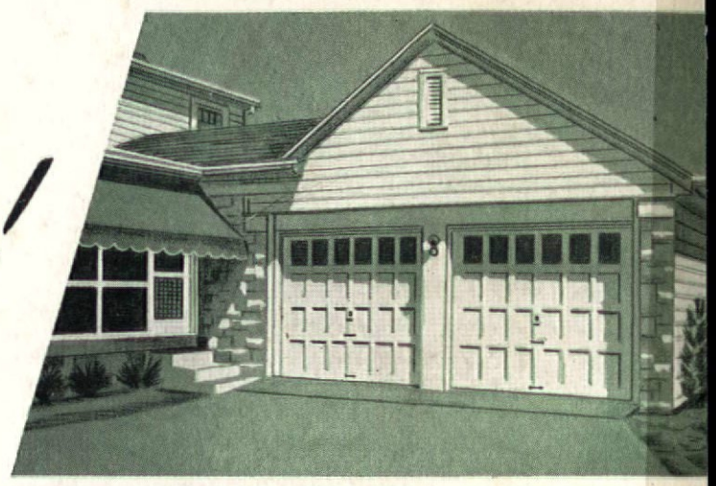

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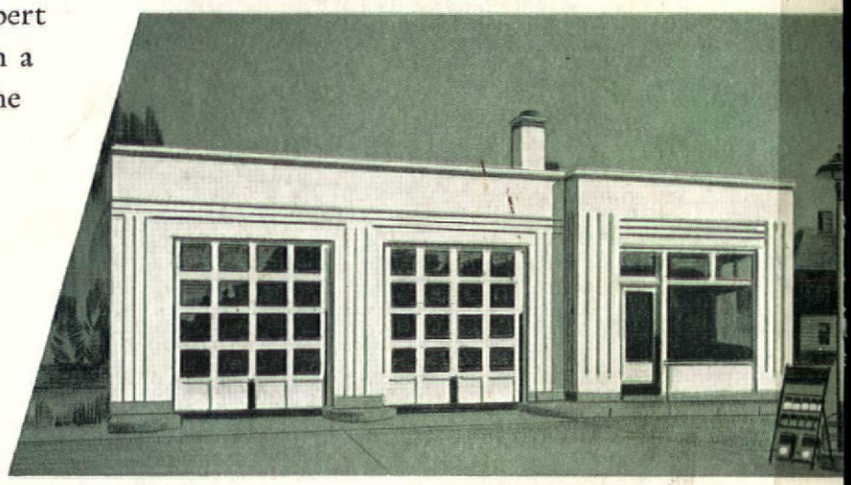

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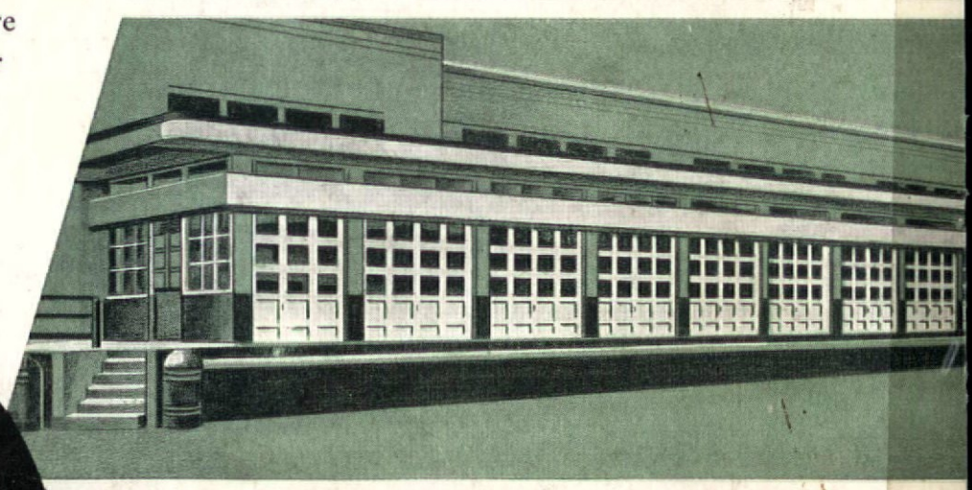

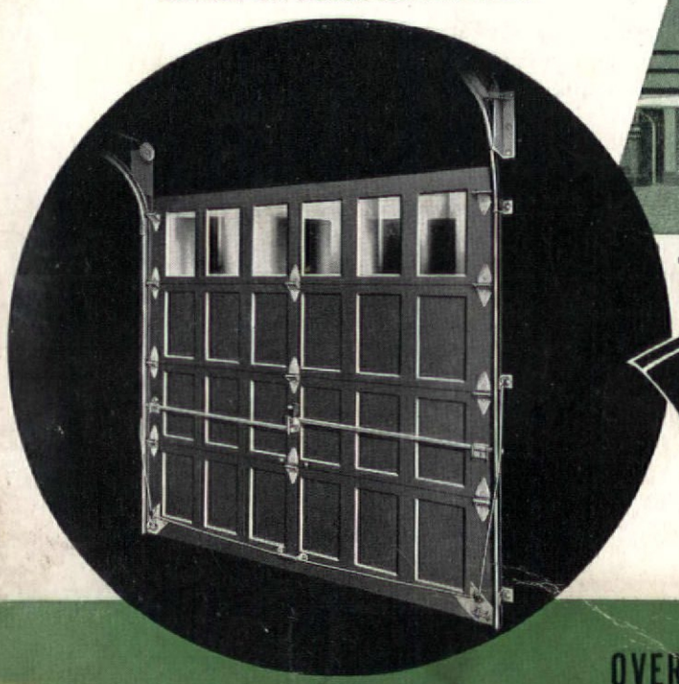

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81 NEW HOUSES

As veterans of twelve special house numbers published in the past six years, FORUM editors still confess to the same excitement which attended the first of these semi-annual quests for the best in American small house architecture. With each installment of the continued story of architects and the small house, there emerges more clearly a pattern of development. Never has the pattern looked more promising than in the collection of houses shown here.

Last year was a 440,000-house year. There was no difficulty in finding good houses, but it was not easy to make a choice that would be truly representative of all types and all sections of the country. In making their selections, the Editors were generously aided by numerous chapters of the American Institute of Architects, each of which carried out its own preliminary survey. The results of this collaborative effort are embodied in the 81 houses presented here.

In examining this group both old and new tendencies in design are apparent. The fundamental cleavage between period and modern design remains—but the gap is growing perceptibly smaller. It is not news that "modernistic" has been giving way to something closer to the popular conception of home—but it can now be seen that the period house has also been changing. It no longer relies so heavily on the tricks of eclecticism. Replacing the sagging roof lines, imitation half-timber and "correct" detail is a return to the traditional concern with contemporary problems of building. Between the plans of many period and modern houses in this issue there is little choice, and almost the same can be said for the more thoughtfully designed exteriors.

Growing up between these two changing types is another kind of house, possibly more significant than either: the modern house sufficiently camouflaged to keep lending agencies from getting nervous. The importance of this architectural wolf in sheep's clothing lies in the fact that here is a basis for the continuity of development essential to the creation of a new style, one that individual experiments, however exciting, can never achieve.

All three types appear in different forms in various parts of the country,

and even period designs are tending to take on a distinct regional character. The outstanding example of this trend is, of course, the West Coast, but similar developments are visible elsewhere. Such regional expression is not a negation of broader influences: it is simply a recognition of local living habits, climate, materials and accepted building methods. In these several trends, presented here within a framework of five geographical divisions, is contained the main basis for hope that these now divergent movements may ultimately merge in a truly American house.

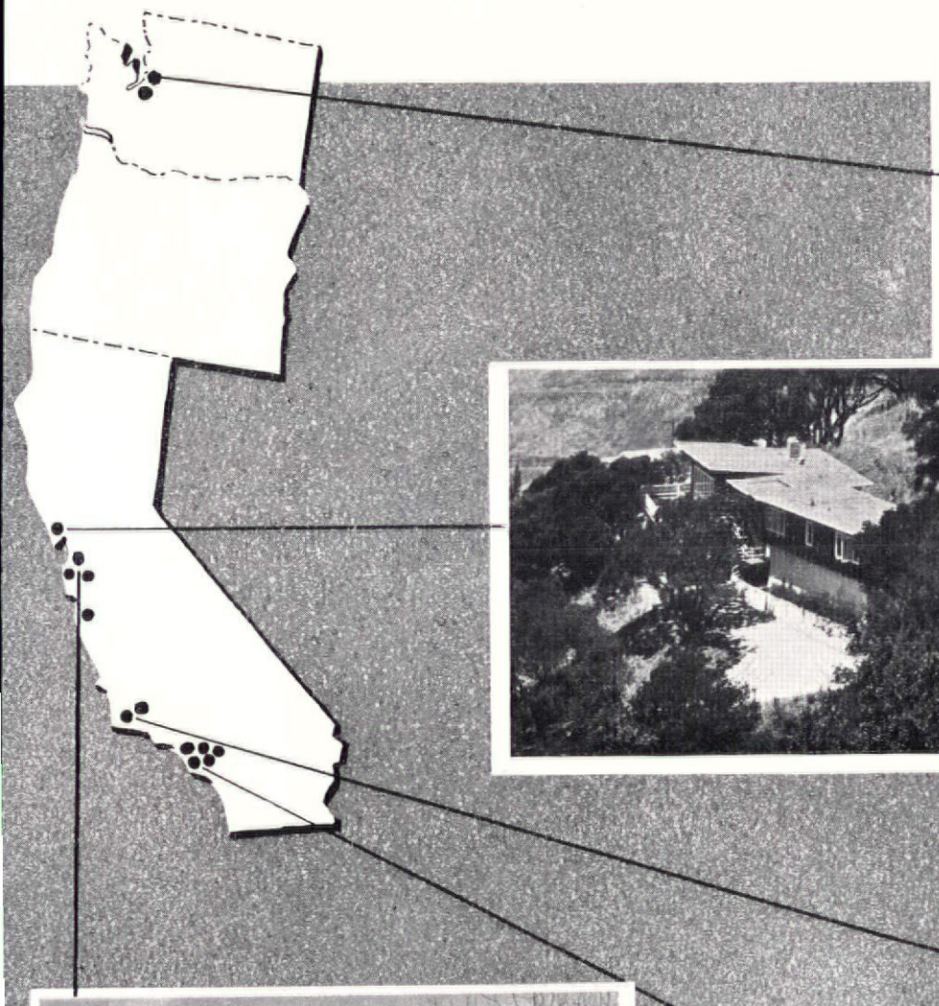
Those who concur with the Editors in their high opinion of the competence displayed in these houses will again ask why the authors of such designs and other qualified private practitioners still wait for their numbers to be called in the defense housing program.

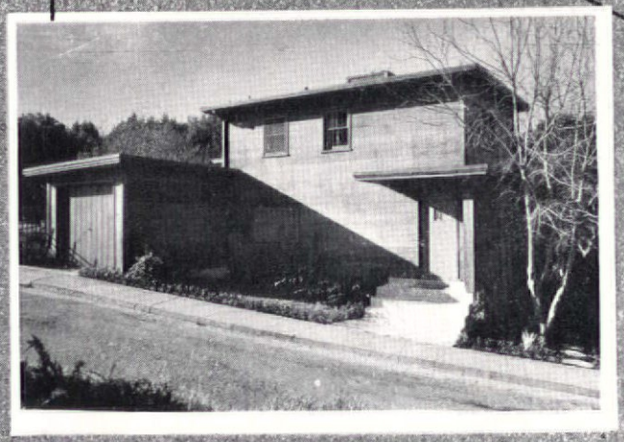
INDEX

ARCHITECT	LOCATION	PAGE
GORDON ALLEN	CANTON, MASS.	303
HARRIS ARMSTRONG	ST. LOUIS COUNTY, MO.	272
ATLEE B. & ROBERT M. AYRES	SAN ANTONIO, TEX.	248
WILLIAM J. BAIN	SEATTLE, WASH.	241
W. POPE BARNEY	NEWTOWN SQUARE, PA.	304
	WALLINGFORD, PA.	302
BEATTY & STRANG	MADISON, WIS.	286
RICHARD G. BELCHER	YONKERS, N. Y.	300
BERNINGER & BOWER	BRYN ATHYN, PA.	292
SHELDON BRUMBAUGH	McCOOK, NEB.	275
CHESTER L. CARJOLA	SANTA BARBARA, CALIF.	233
CAMERON CLARK	FAIRFIELD, CONN.	298
CLOSE & SCHEU	MINNEAPOLIS, MINN.	274
WILSON CONNELL, JR.	HINSDALE, ILL.	268
MARIO CORBETT	CARMEL, CALIF.	244
GARDNER A. DAILEY	WOODSIDE, CALIF.	220
FREDERICK A. EASTMAN	TUCSON, ARIZ.	256
EVANS, MOORE & WOODBRIDGE	NORWALK, CONN.	295
HENRY I. GAINES	ASHEVILLE, N. C.	260
GEDDES & KELLY	STURBRIDGE, MASS.	305
RAYMOND D. GOLLER	COLUMBUS, OHIO	276
ELMER GYLLECK	DUNDEE, ILL.	270
ANDRE HALASZ	LINDEN, N. J.	294
G. THOMAS HARMON, III	DARLINGTON, S. C.	261
	HARTSVILLE, S. C.	264
HERTZKA & KNOWLES	PALO ALTO, CALIF.	224
HYDE & WILLIAMS	DETROIT, MICH.	277
JAMESON & HARRISON	PEORIA, ILL.	276
ELLSWORTH JOHNSON	BERKELEY, CALIF.	242
KENNETH KASSLER	MOUNTAINSIDE, N. J.	290
DONALD B. KIRBY	ONTARIO, CALIF.	229
HOWARD B. KNIGHT	CORAL GABLES, FLA.	259
F. MONROE LABOUISSE	NEW ORLEANS, LA.	266
LaFAYE, LaFAYE & FAIR	COLUMBIA, S. C.	263
JOHN W. LINCOLN	STONINGTON, CONN.	297
FRANCIS E. LLOYD	FAIRFAX, CALIF.	234
ANTHONY LORD	ASHEVILLE, N. C.	262
	ASHEVILLE, N. C.	264
HARRY MASLOW	LINDEN, N. J.	300
McMURRAY & SCHMIDLIN	NUTLEY, N. J.	293
CHARLES F. MINK	MAMARONECK, N. Y.	301
THOMAS E. MOORE	DENVER, COLO.	280
MOORE & HUTCHINS	POUNDRIDGE, N. Y.	306
RICHARD A. MORSE & ARTHUR T. BROWN	TUCSON, ARIZ.	251
MURPHY & WISCHMEYER	UNIVERSITY CITY, MO.	282
RICHARD J. NEUTRA	LOS ANGELES, CALIF.	230
JOHN NORMILE	DES MOINES, IOWA	271
PERRY, SHAW & HEPBURN	CONCORD, MASS.	294
POTTER, TYLER & MARTIN	OXFORD, OHIO	285
WINCHTON L. RISLEY	GLANDALE, CALIF.	237
SAVERY, SCHEETZ & GILMOUR	PENN VALLEY, PA.	292
CARL SCHMUELLING	CINCINNATI, OHIO	284
W. H. SEARS & P. B. SHEPHERD	LOOKOUT MOUNTAIN, TENN.	265
SKIDMORE, OWINGS & MERRILL	WILLIAMS BAY, WIS.	281
WINSOR SOULE & JOHN F. MURPHY	SANTA BARBARA, CALIF.	232
B. E. STARR	HARRISBURG, PA.	304
CHARLES M. & EDWARD STOTZ, JR.	CORAOPOLIS, PA.	296
J. ROBERT F. SWANSON	BIRMINGHAM, MICH.	278
EDWARD W. TANNER & ASSOC.	KANSAS CITY, KANSAS	288
PAUL THIRY	SEATTLE, WASH.	226
ARTHUR E. THOMAS	DALLAS, TEX.	246
I. GAYDEN THOMPSON	CORSICANA, TEX.	247
W. STUART THOMPSON	COLD SPRING HARBOR, L. I., N. Y.	296
VOORHEES & EVERHART	WINSTON-SALEM, N C.	258
ERLE WEBSTER & ADRIAN WILSON	LOS ANGELES, CALIF.	222
FREDERICK W. WHITTLESEY	PHOENIX, ARIZ.	249
F. CARTER WILLIAMS	ROCKY MOUNT, N. C.	260
ROYAL BARRY WILLS	IPSWICH, MASS.	308
TALBOTT WILSON & IRWIN MORRIS	HOUSTON, TEX.	248
	HOUSTON, TEX.	250
WILLIAM W. WURSTER	SARATOGA, CALIF.	238
BENJAMIN K. WYATT	SAN ANTONIO, TEX.	254

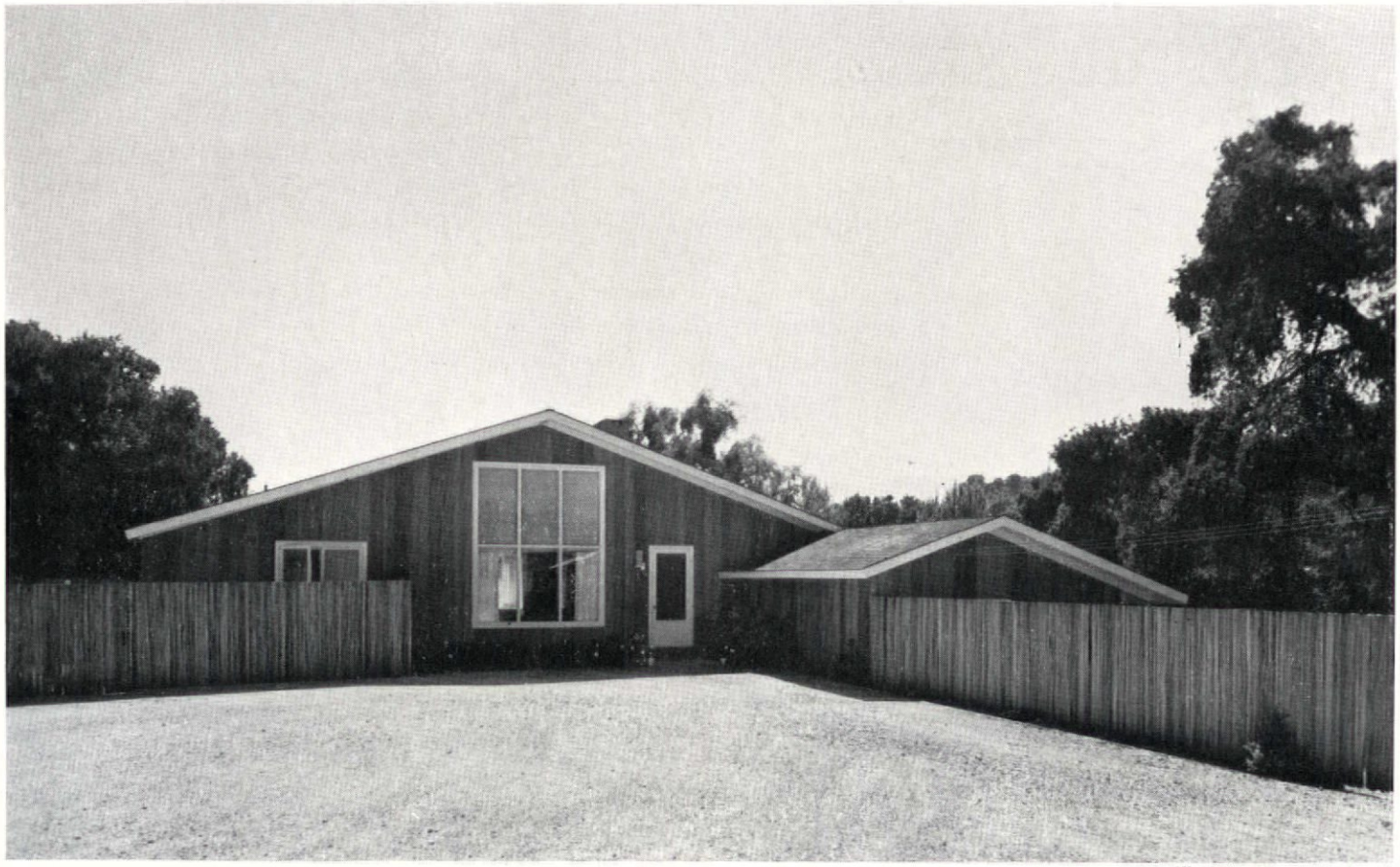
WEST COAST

The West Coast has a climate ranging from sub-tropical to temperate and humid. Except on the slopes of the Rockies the heating season is short or non-existent. Lumber is the chief building material, easily available and cheap. A substantial percentage of the building sites are irregular and hilly. The character of the land, the climate and the choice of materials combine to make it an almost ideal region for building. California's modern architects have taken full advantage of these factors, developing in the process an extremely interesting local style. Recently a new group has appeared in the Northwest whose work shows promise of equally vigorous regional character.





TWO BEDROOMS, ONE BATH, DINING ALCOVE, LAUNDRY, NO BASEMENT



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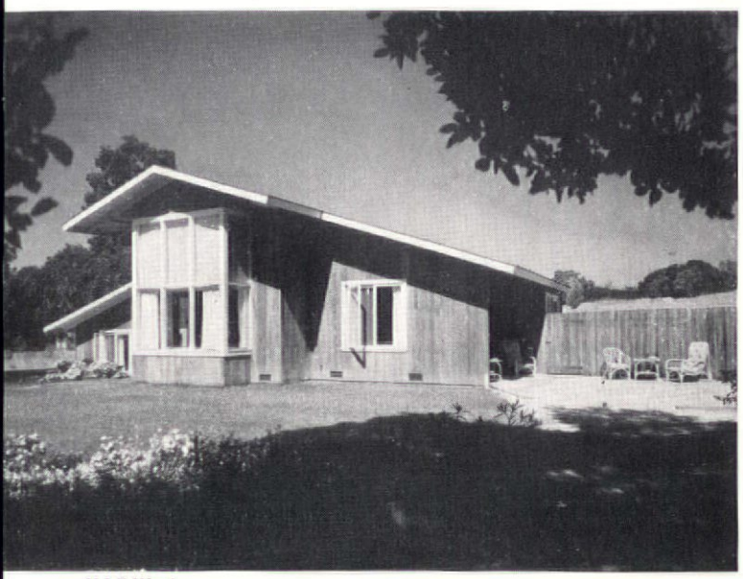
WOODSIDE, CALIF. GARDNER A. DAILEY, ARCHITECT, A.I.A.

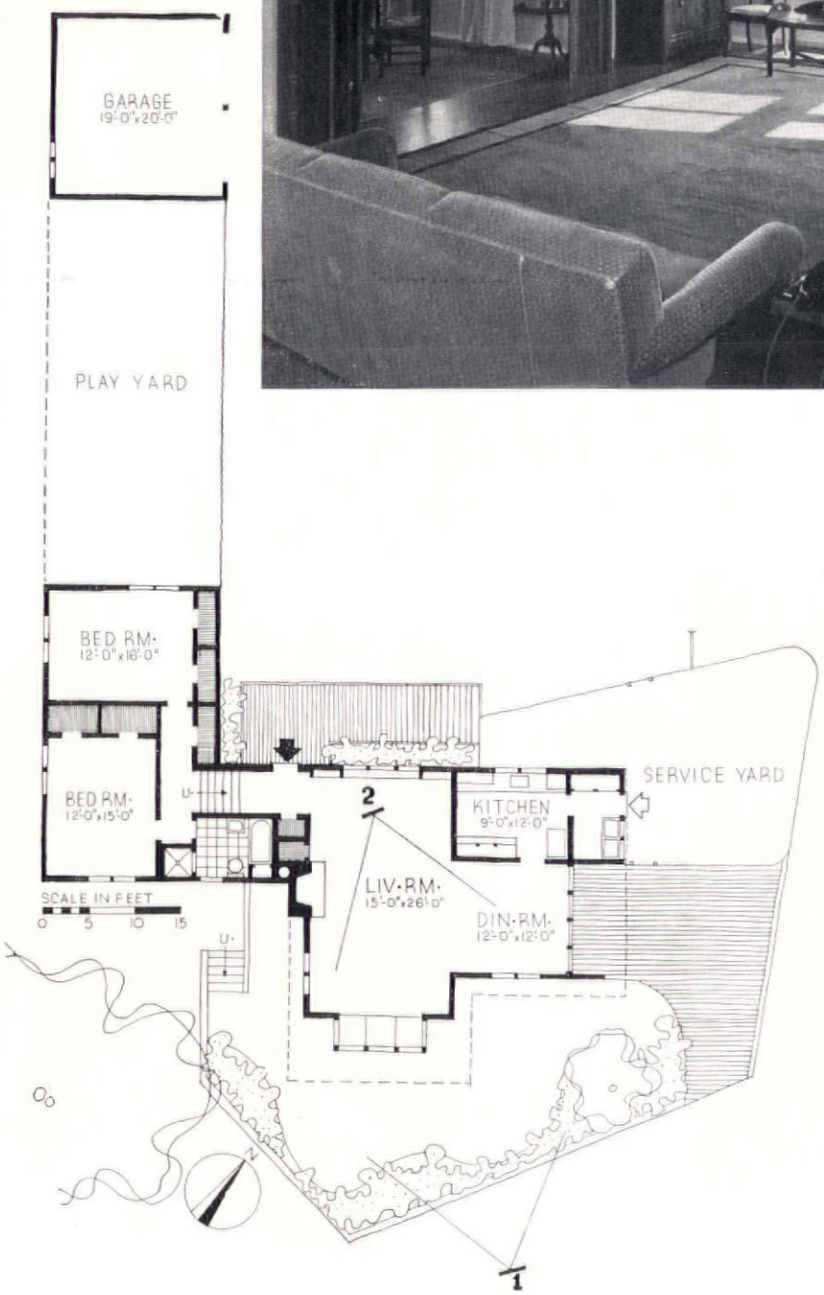


VIEW 1.

VIEW 2.

This striking design borrows some of the best (and least appreciated) features of the Victorian style to produce a sort of "Hudson River Bracketed" minus the brackets. Particularly does the view of bold living-room bay, directly above, with its crisp roof lines, generous overhang, and high window, recall the late nineteenth century and suggest that this "period," with all its excesses, may yet play an important part in the development of an indigenous American house. The house is planned on two levels, with an open living-dining room and kitchen in the upper portion, two bedrooms and a bath about a half a floor below.

Closets are generous; a small laundry next to the kitchen does double duty as a service vestibule. Cost: 42 cents per cu. ft.



CONSTRUCTION OUTLINE

STRUCTURE: Exterior walls—vertical redwood shiplap, Douglas fir studs. Interior partitions—Douglas fir studs, wood lath, U. S. Gypsum Co. plaster.

ROOF: Covered with redwood shingles.

INSULATION: Roof—Celotex Corp.

WINDOWS: Sash—double hung, sugar pine. Glass—Pennvernon, double strength, quality B, Pittsburgh Plate Glass Co.

FLOOR COVERINGS: Main rooms—oak. Kitchen and bathrooms—linoleum over plywood.

HARDWARE: By Sargent & Co.

PAINTS: By Pratt & Lambert.

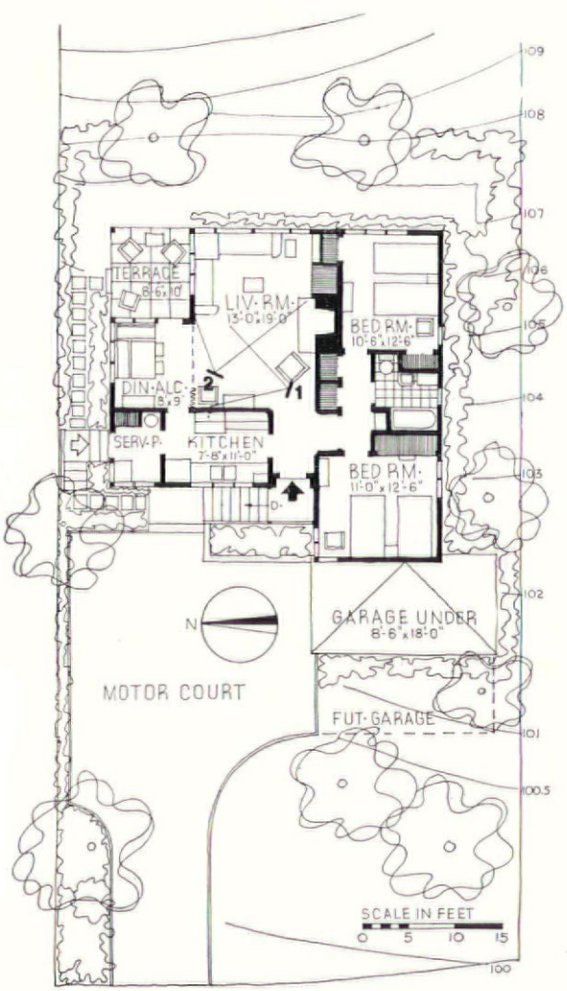
BATHROOM EQUIPMENT: By Kohler Co.

PLUMBING: Cold water pipes—galvanized steel. Hot water pipes—copper tubing.

HEATING: Oil fired unit used for both forced warm air and water heat, Crane Co.

TWO BEDROOMS, ONE BATH, DINING ALCOVE, ATTACHED GARAGE, SLOPING SITE

Miles Berné Photos



LOS ANGELES, CALIF. ERLE WEBSTER & ADRIAN WILSON, ARCHITECTS, A.I.A.

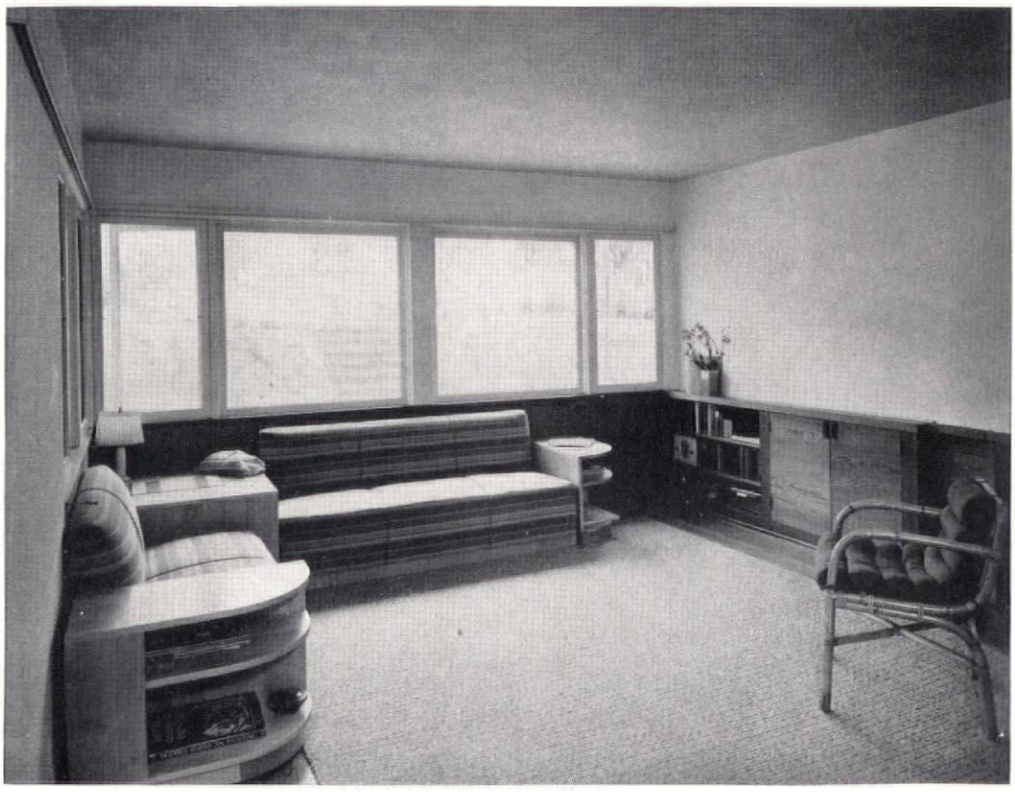
VIEW 1.

This highly efficient and workable plan places all of the rooms on a single floor at the level of the rear garden, is equally well adapted to a level site. A small entrance hall, conveniently adjoining the kitchen, provides direct access to the living room and bedrooms. The living-dining room is in the shape of an L which surrounds a terrace, an increasingly popular arrangement that is exceedingly attractive and has the advantage of providing a definite area for dining without sacrificing the openness of the plan. Living and dining room windows, which face south and east, are generous; overhanging eaves protect the out-swinging casements and shut out summer sun. Cost $4,184. Cubage 17,480.

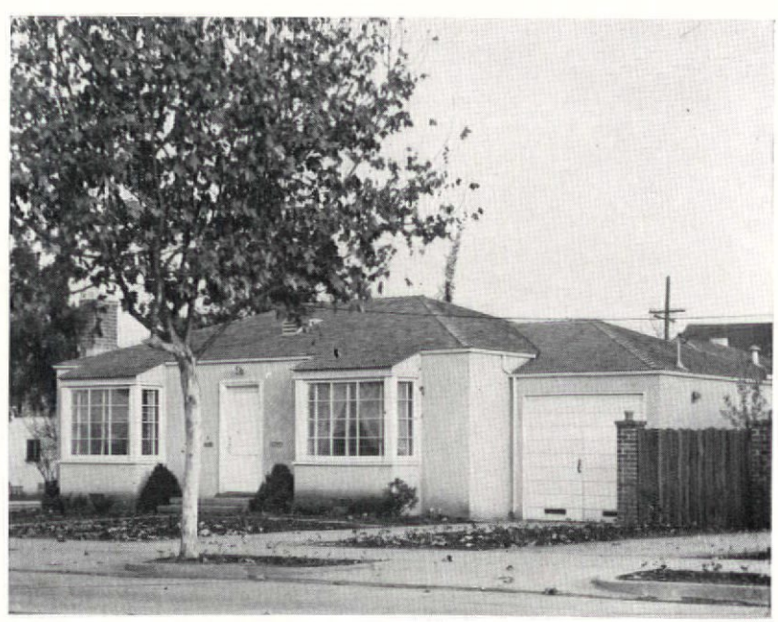
CONSTRUCTION OUTLINE

FOUNDATION: Concrete.
STRUCTURE: Exterior walls — Portland cement stucco, studs; inside—gypsum plasterboard lath, cement plaster, interior stucco and Keene's cement finish. Floor construction—oak finish.
ROOF: Covered with red cedar shingles.
SHEET METAL WORK: Galvanized iron throughout.
WINDOWS: Sash — sugar pine casement. Glass—double strength, quality B, Libbey-Owens-Ford Glass Co.
FLOOR COVERINGS: Main rooms—common oak. Kitchen and bathrooms—linoleum, Armstrong Cork Co.
WOODWORK: Trim (living room)—redwood; elsewhere—California pine and Douglas fir. Doors—"Sturdibilt," M. & M. Woodworking Co.
HARDWARE: By Schlage Lock Co.
PAINTS: By National Chemical & Mfg. Co.
ELECTRICAL INSTALLATION: Wiring system—concealed flexible metallic conduit. Switches—Despard, Pass & Seymour.
BATHROOM EQUIPMENT: By American Radiator-Standard Sanitary Mfg. Co. Cabinets—Dura Steel Products Co.
PLUMBING: Soil pipes—cast iron. Hot and cold water pipes—galvanized steel.
HEATING: Floor furnace, Ward Heater Co. Water heater—General Water Heater Co.

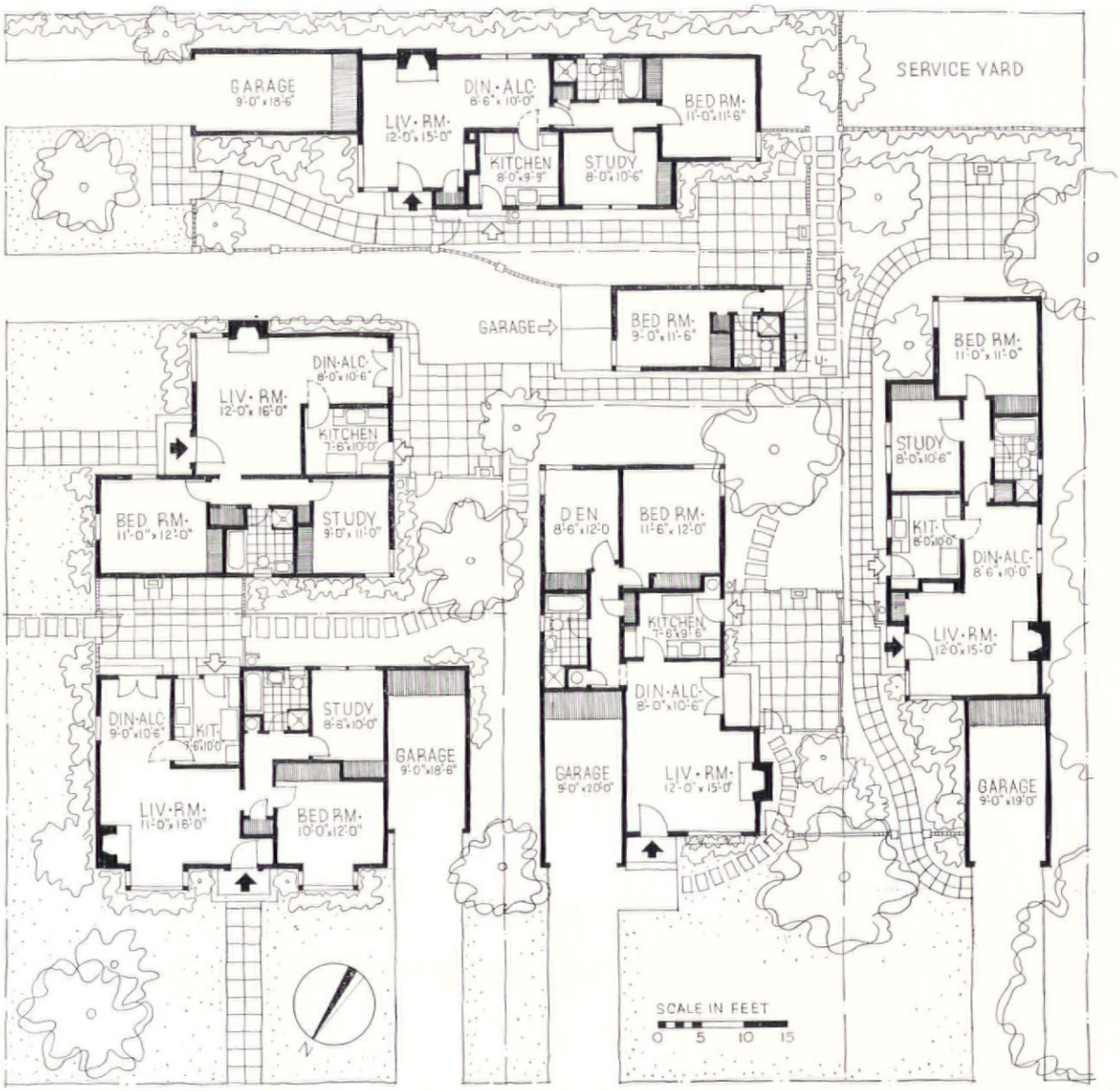
VIEW 2.



TWO BEDROOMS, ONE BATH, LIVING-DINING ROOMS, ATTACHED GARAGES



PALO ALTO, CALIF. HERTZKA & KNOWLES, ARCHITECTS, A.I.A.



A five-house development which includes several interesting variations of the standard low cost plan. In all cases, a definite portion of the living room is set aside for dining; all but one of the garages are attached but have no inside connection to the house. Despite the fact that the plot, which is only 125 ft. square, is rather crowded, careful placement of the windows has afforded considerable privacy, although sometimes at the expense of through ventilation for the bedrooms. Room and bath over the detached garage are for a caretaker. Total cubage: 50,000. Cost, $16,748, or an average of $3,350 per house.

CONSTRUCTION OUTLINE

STRUCTURE: Exterior walls—Douglas fir studs, diagonal sheathing, exterior stucco, Pacific Portland Cement Co., 15 lb. waterproof asphalt felt, Johns-Manville; inside—stucco, California Stucco Co. Interior partitions—studs and plaster. Floor construction—Douglas fir T. & G., plywood or oak finish flooring.

ROOF: Covered with cedar shingles..

FIREPLACE: Damper—Richardson Damper Co.

SHEET METAL WORK: Galvanized iron, 26 gauge.

WINDOWS: Sash—sugar pine, double hung and casement, Pacific Manufacturing Co. Glass—quality B, double strength, Libbey-Owens-Ford Glass Co.

FLOOR COVERINGS: Main rooms—oak. Kitchen and bathrooms—linoleum, Armstrong Cork Co.

WOODWORK: Trim and doors—white pine and Douglas fir, Pacific Manufacturing Co.

HARDWARE: By P. & F. Corbin.

PAINTS: By M. Friedman & Sons.

ELECTRICAL INSTALLATION: Wiring system—knob and tube. Switches—toggle, Arrow, Hart & Hegeman Electric Co. Fixtures—Lightolier Co.

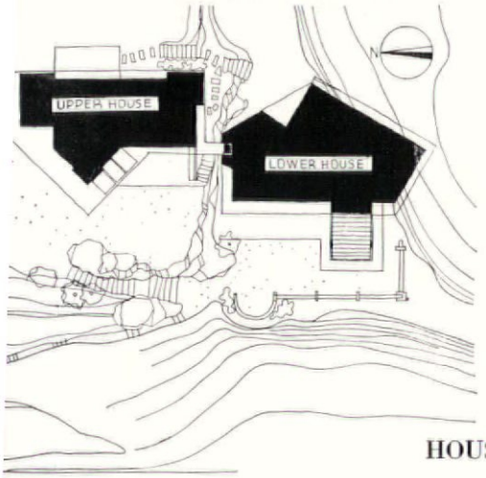
KITCHEN EQUIPMENT: Range—gas, Florence Stove Mfg. Co. Refrigerator, sink and cabinets—Sears-Roebuck.

LAUNDRY EQUIPMENT: Washing machine—Bendix Home Appliances.

BATHROOM EQUIPMENT: By Kohler Co. Shower—Henry Weis Mfg. Co. Cabinets—Hallensheid & McDonald Mfg. Co.

PLUMBING: Soil pipes—cast iron. Hot and cold water pipes—galvanized soft steel.

HEATING: Warm air floor furnaces — Electro-Gas Furnace Co. Water heater—Federal Water Heater Co.

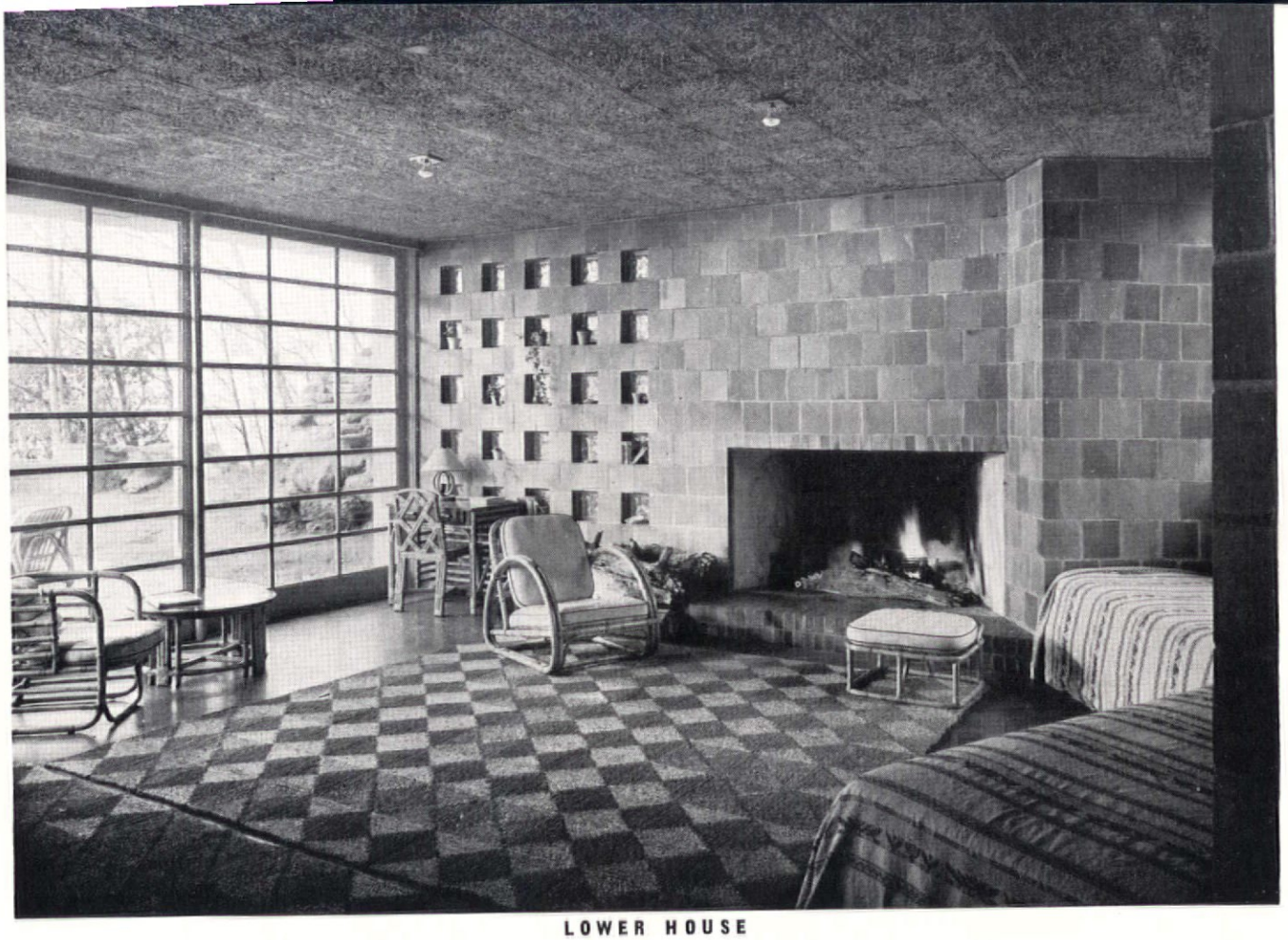


Richard Garrison Photos

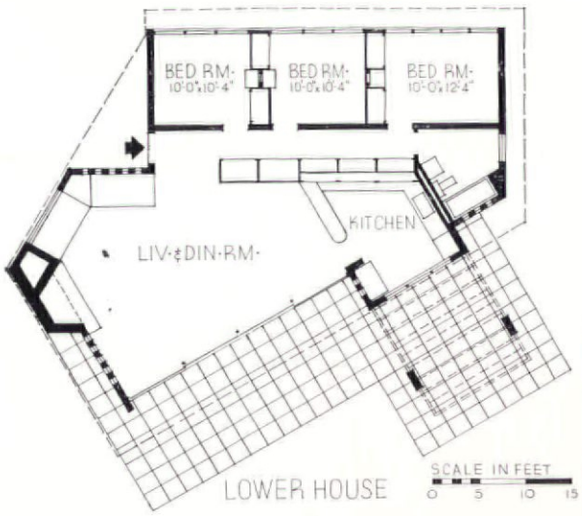
UPPER HOUSE

HOUSES NEAR SEATTLE, WASH. PAUL THIRY, ARCHITECT, A.I.A.

LOWER HOUSE

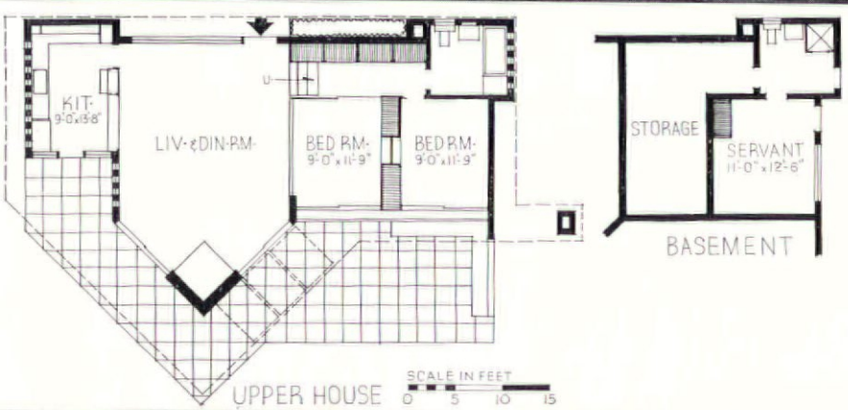


LOWER HOUSE



These connected houses are situated in a tract of timberland about fifteen miles from Seattle. Owned by a brother and sister, they are used only weekends and in summer. Due to the generally high humidity in this area, an attempt was made to eliminate all moisture-absorbing materials, with the very unusual results shown here. Floors are hard, there is no plaster, walls are of hollow tile exposed inside and out; in some of the walls glass block is ingeniously combined with the tile. Porch furniture was used for its damp-resistant qualities. A considerable degree of standardization is evident in the two houses, especially in the plans, where closets are used as partitions, and in the design of the kitchens as integral parts of the main living areas. Cubage: Lower house, 17,670; Upper house, 17,210.

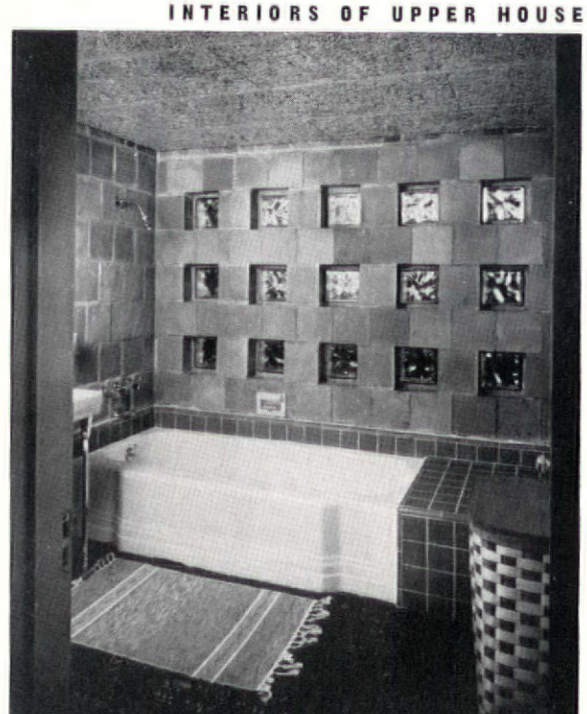
KITCHEN—LIVING ROOM



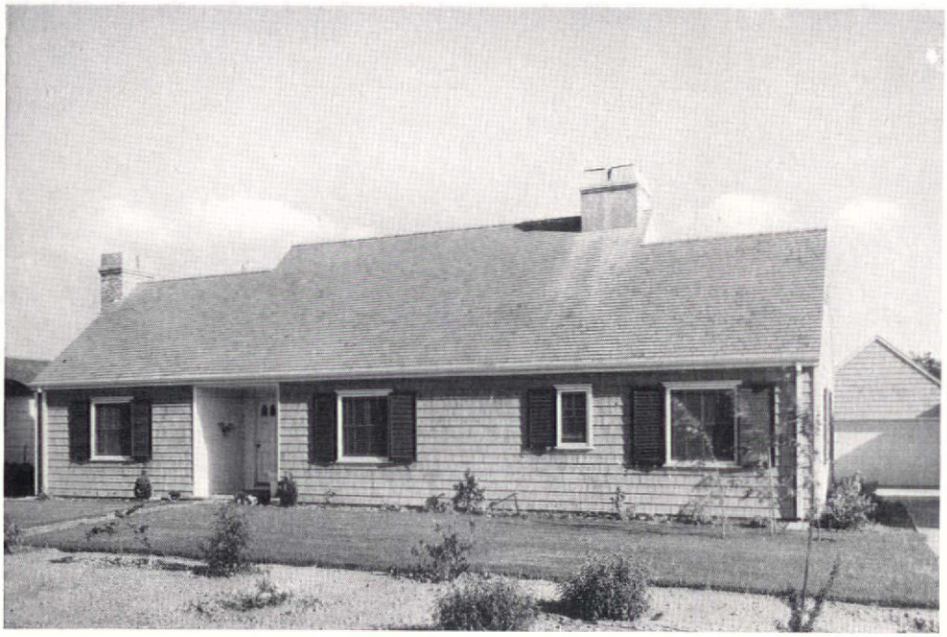
CONSTRUCTION OUTLINE

STRUCTURE: Exterior walls—single wall, hollow tile, Heath Cube, Seattle Brick & Tile Co. Floor construction—(1st) reenforced concrete slab over 4 in. hollow tile; topped with Raecolith, Raecolith Floor Co. Ceilings —1 in. Thermax, exposed, Celotex Corp.
ROOFING: Covered with 4-ply tar and gravel, Pioneer-Flintkote Co.
FIREPLACE: Damper—Superior Fireplace Co.
SHEET METAL WORK: Flashing and ducts —Anaconda copper, American Brass Co.
INSULATION: Rockwool, Philip Carey Co.
WINDOWS: Sash—wood. Glass—single and double strength, Libbey-Owens-Ford Glass Co. Glass blocks—Pittsburgh-Corning Corp.
WOODWORK: Douglas fir throughout. Cabinets—plywood.
PAINTS: I. F. Laucks, Inc.
ELECTRICAL INSTALLATION: Wiring system—knob and tube and rigid conduit. Switches—Harvey Hubbell, Inc. Fixtures—Seattle Lighting Fixtures Co.
KITCHEN EQUIPMENT: Drainboards—red quarry tile, Rodgers Tile Co.
BATHROOM EQUIPMENT: By American Radiator-Standard Sanitary Corp. Shower stalls—Weisway, Henry Weis Mfg. Co.

INTERIORS OF UPPER HOUSE

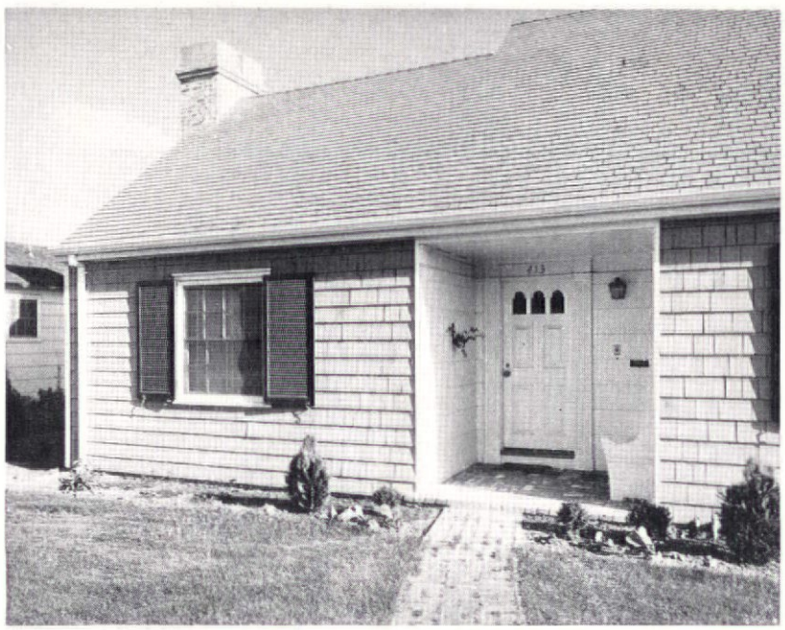


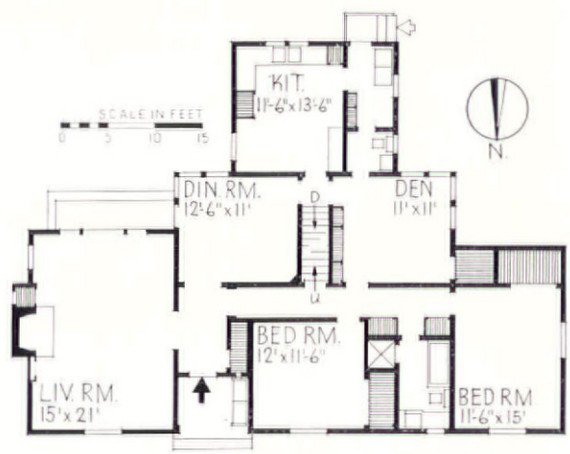
TWO BEDROOMS, DEN, ATTIC SPACE FOR FUTURE BEDROOMS AND BATH



The exterior views of this house show a Cape Cod cottage rather far from home. Behind the modest front is an unusual plan, with the rooms arranged within an almost symmetrical envelope. The entry is the focal point of all circulation, with living and dining rooms opening directly off it, and a long corridor which links the two bedrooms and den into a completely private unit. In conformity with a practice that has become almost standard, the study is convertible into a third bedroom. Provision has been made for two bedrooms and a bath on the second floor. Cost: $7,372. Cubage: (house) 25,340; (garage) 4,380.

ONTARIO, CALIF. DONALD BEACH KIRBY, ARCHITECT, A.I.A.





W. P. Woodcock Photos

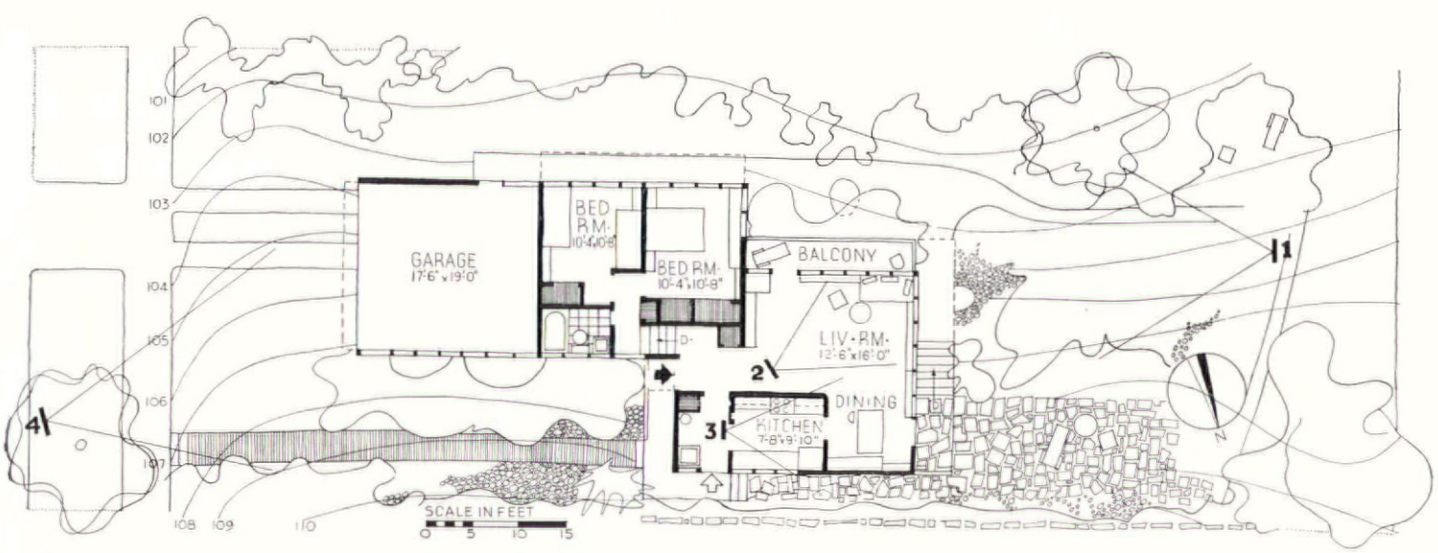
CONSTRUCTION OUTLINE

STRUCTURE: Exterior walls—Douglas fir framing and sheathing, redwood mudsills, Royal cedar shingles over tar paper. Interior—plaster. Floor construction—oak finish.
ROOF: Covered with cedar shingles.
SHEET METAL WORK: Galvanized iron throughout.
WINDOWS: Sash—sugar pine, double hung. Glass—Pennvernon, single strength, quality B, Pittsburgh Plate Glass Co.
FLOOR COVERINGS: Kitchen and bathrooms—linoleum, Armstrong Cork Co.
WALL COVERINGS: Living room and one bedroom—wallpaper, C. W. Stockwell & Co.; remainder—plaster.
WOODWORK: Ponderosa pine throughout.
HARDWARE: By Schlage Lock Co.
ELECTRICAL FIXTURES: Luminaire, Inc.
KITCHEN EQUIPMENT: Range—gas, Gaffers & Sattler. Refrigerator—Electrolux, Servel, Inc.
LAUNDRY EQUIPMENT: Washing machine—Thor, Hurley Machine Div., Electric Household Utilities Corp.
BATHROOM EQUIPMENT: By Crane Co. Shower—tile, Gladding, McBean & Co. Cabinets—Dura Steel Products Co.
PLUMBING: Hot and cold water pipes—galvanized.
HEATING: Warm air furnace, gas, gravity, Arthur Betz Heating Co. Water heater—Day & Night Heating Co.

TWO BEDROOMS, GARAGE DESIGNED FOR CONVERSION INTO STUDIO

VIEW 1.

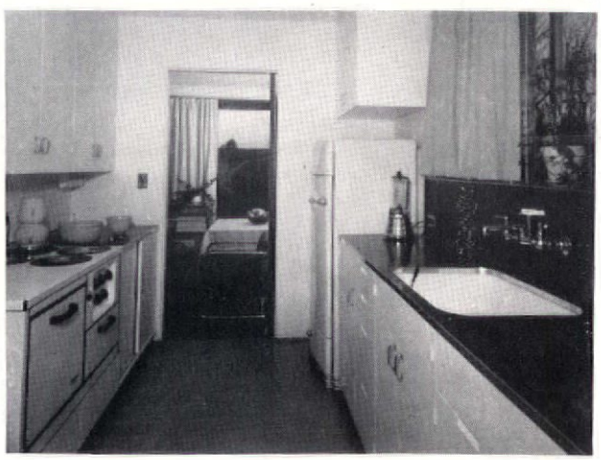
All photos, Luckhaus



LOS ANGELES, CALIF. RICHARD J. NEUTRA, ARCHITECT, A. I. A.

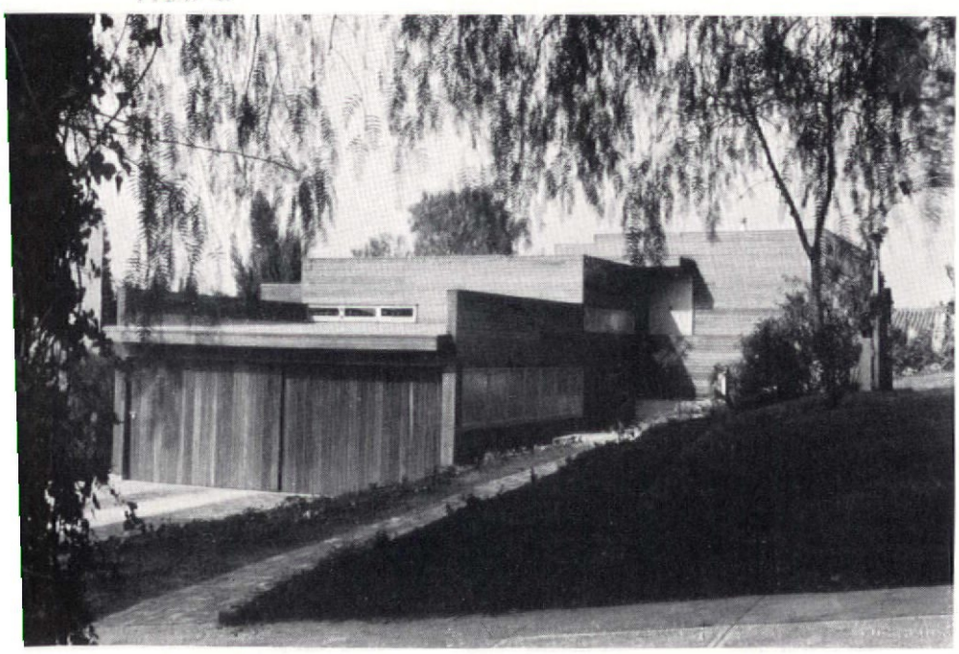
VIEW 2.

VIEW 3.



The architect comments: "An inexpensive house, designed for low maintenance. A sloping lot required a floor plan on three levels: garage, sleeping rooms and living area. The garage has large windows along the north side and access to the garden on the south. It is planned to convert this into a studio at some later date and to erect a future car shelter at the front of the property." Cost: $4,500. Cubage: 13,800.

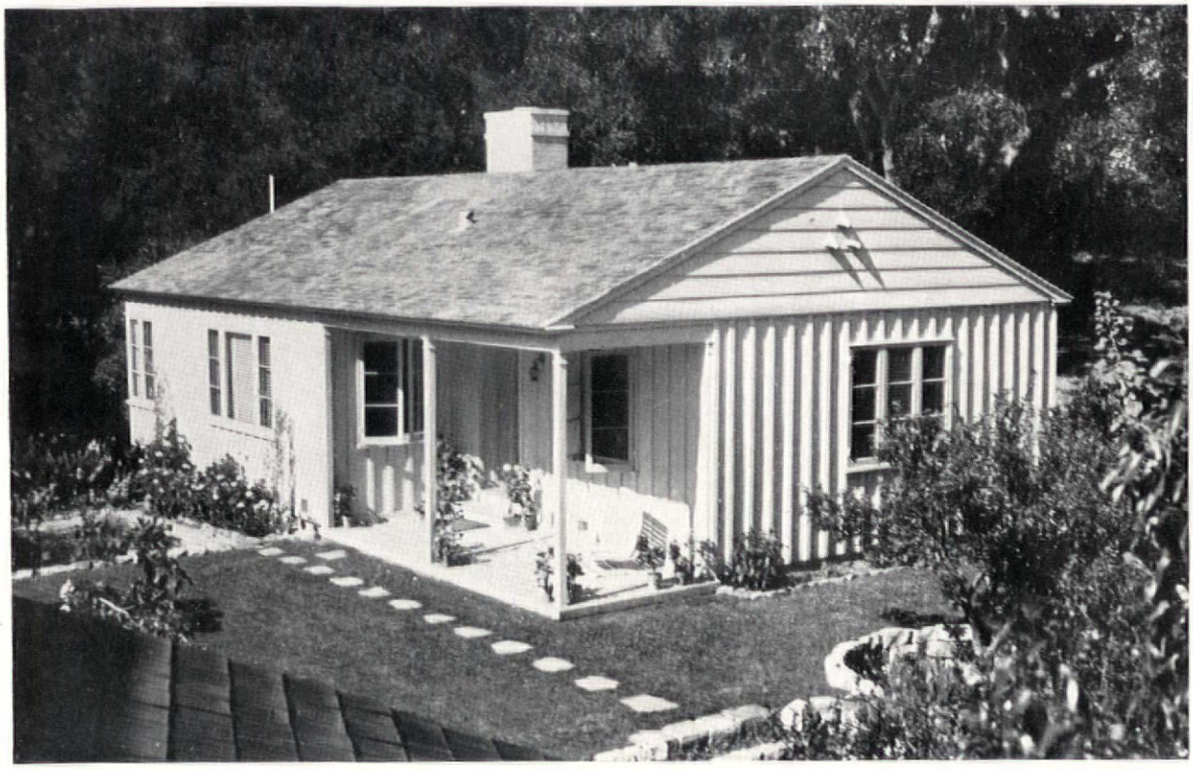
VIEW 4.



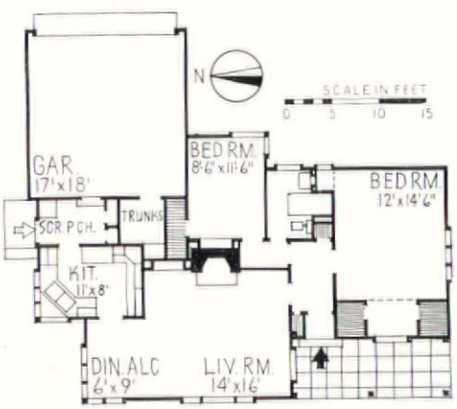
CONSTRUCTION OUTLINE

STRUCTURE: Exterior walls—diagonally braced timber chassis, redwood shiplap siding; inside—plaster over wood lath.
ROOF: Composition roofing, Johns-Manville.
SHEET METAL WORK: Flashing—24 gauge galvanized sheet metal, Columbia Steel Co.
WINDOWS: Sash—wood casements, sugar pine frame, Patten Blinn Lumber Co. Operators—Sylvester Sash Operators, Inc. Glass—double strength, quality A, Libbey-Owens-Ford Glass Co.; Factrolite in garage workshop, Mississippi Glass Co.
FLOOR COVERINGS: Main rooms—carpet. Kitchen and bathrooms—linoleum, Armstrong Cork Co.
HARDWARE: By Schlage Lock Co.
PAINTS: By Leon Finch, Ltd.
ELECTRICAL INSTALLATION: Wiring system—flexible and rigid conduit, Hazard Insulated Wire Works. Switches—Bryant Electric Co.
KITCHEN EQUIPMENT: Range—electric. Refrigerator—Sunbeam Electric Mfg. Co.
BATHROOM EQUIPMENT: Fixtures by Crane Co.
PLUMBING: Cold water pipes—galvanized steel. Hot water pipes—galvanized wrought iron.
HEATING: Recessed, ventilated gas wall heater in living room, Andrews Heater Co. Water heater—gas-fired, Crane Co.

TWO BEDROOMS, BATH, LIVING-DINING ROOM, ATTACHED GARAGE



SANTA BARBARA, CALIF. WINSOR SOULE & JOHN FREDERIC MURPHY, ARCHITECTS, A.I.A.



The plan of this cottage shows sleeping accommodations for three, with a living room and kitchen of good size. The design is more generous in its allocation of space than most small two-bedroom houses, but far from wasteful. Treatment of the exterior is completely unassuming, with a small entrance porch filling out the rectangle covered by the main roof. A vigorous board and batten wall adds texture to the exterior. Cost: $4,472. Cubage: 10,800.

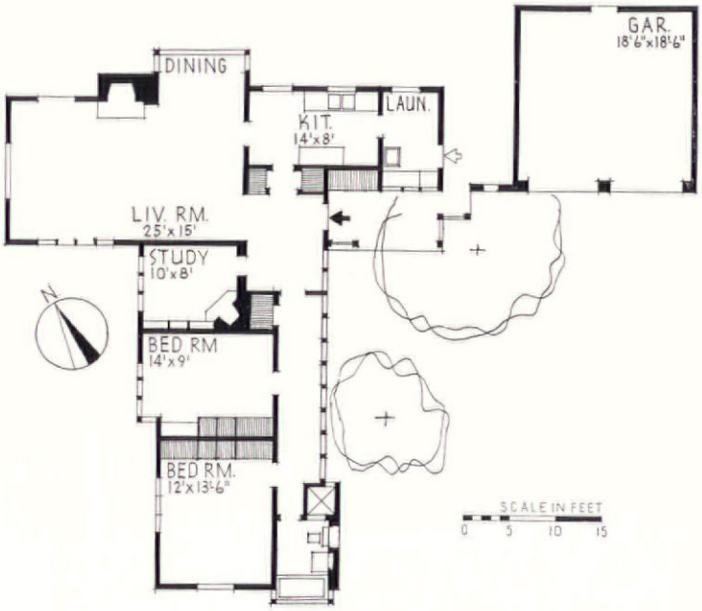
CONSTRUCTION OUTLINE

STRUCTURE: Exterior walls—Ponderosa knotty pine boards molded joint inside, covered with ⅞ in. Battens interior partitions—Ponderosa pine. Floor construction—2 in. T. & G. plank on girders, 5 ft. o. c.
WINDOWS: Sash—wood casements. Glass—Libbey-Owens-Ford Glass Co.
HARDWARE: By Yale & Towne Mfg. Co.
KITCHEN EQUIPMENT: Range—Magic Chef, American Stove Co. Refrigerator—Frigidaire Corp.
BATHROOM FIXTURES: By American Radiator-Standard Sanitary Corp.
PLUMBING: Hot and cold water pipes—Anaconda copper, American Brass Co.
HEATING: Gas-fired thermostatically controlled warm air furnace. Water heater—General Water Heater Co.

Wilkes Photos

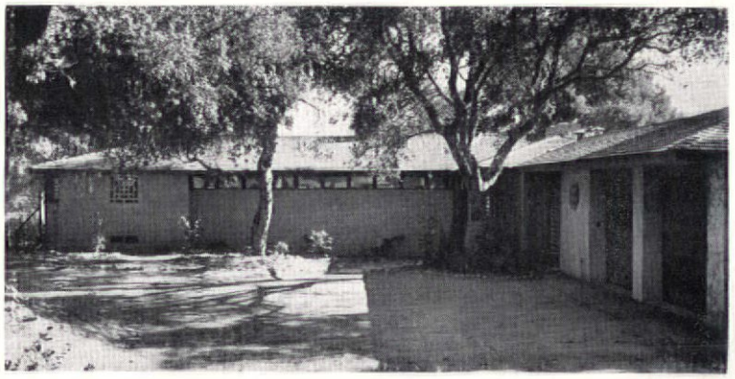
TWO BEDROOMS, ONE BATH, STUDY, LAUNDRY, ATTACHED GARAGE

This bold and workmanlike plan solves most of the problems posed by the single-story house in an exemplary fashion; all of the principal rooms are directly accessible from the central entrance hall; none serves as a corridor for essential circulation; the front door is near the kitchen; daytime rooms overlook the rear garden; a laundry-utility room is provided in lieu of a basement. Provision for formal and informal dining is excellent, fenestration of the elongated bedroom corridor makes an attractive feature of what might otherwise have been an unfortunate necessity. Cost, $10,000 not including architect's fee. Cubage: 21,000.

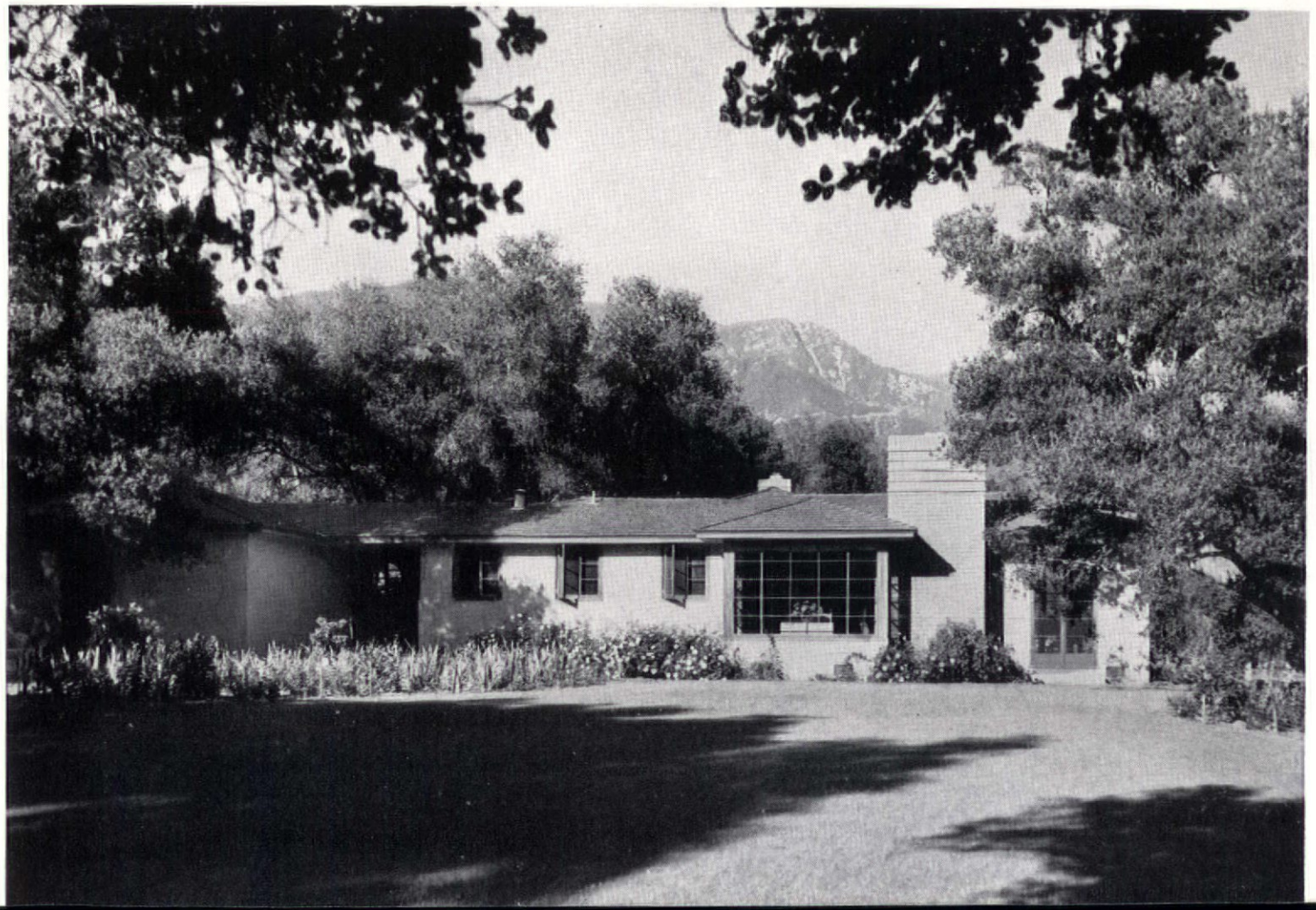


CONSTRUCTION OUTLINE

STRUCTURE: Exterior walls—studs, metal lath, cement plaster; inside—rocklath and stucco.
ROOF: Covered with Royal cedar shingles.
FIREPLACE: Damper—Superior Fireplace Co.
WINDOWS: Sash—special redwood, double hung and casements. Glass— single strength, Libbey-Owens-Ford Glass Co.
FLOOR COVERINGS: Living room and halls—grass mats. Bedrooms—carpet. Kitchen and bathrooms—linoleum, Armstrong Cork Co.
HARDWARE: By Yale & Towne Mfg. Co.
ELECTRICAL INSTALLATION: Wiring—3-wire system. Switches—Bryant Electric Co.
KITCHEN EQUIPMENT: Range—Magic Chef, American Stove Co. Refrigerator—Frigidaire Corp.
BATHROOM EQUIPMENT: Toilet—W. A. Case & Son Mfg. Co., remainder of fixtures—Crane Co.
PLUMBING: Hot and cold water pipes—copper, Chase Brass & Copper Co. Water softening system—Harold Marks Co.
HEATING: Warm air system, unit gas furnace and grilles, Payne Furnace & Supply Co. Water heater—Crane Co. Tank—Everdur, American Brass Co. Ventilating fan—Pryne Co.

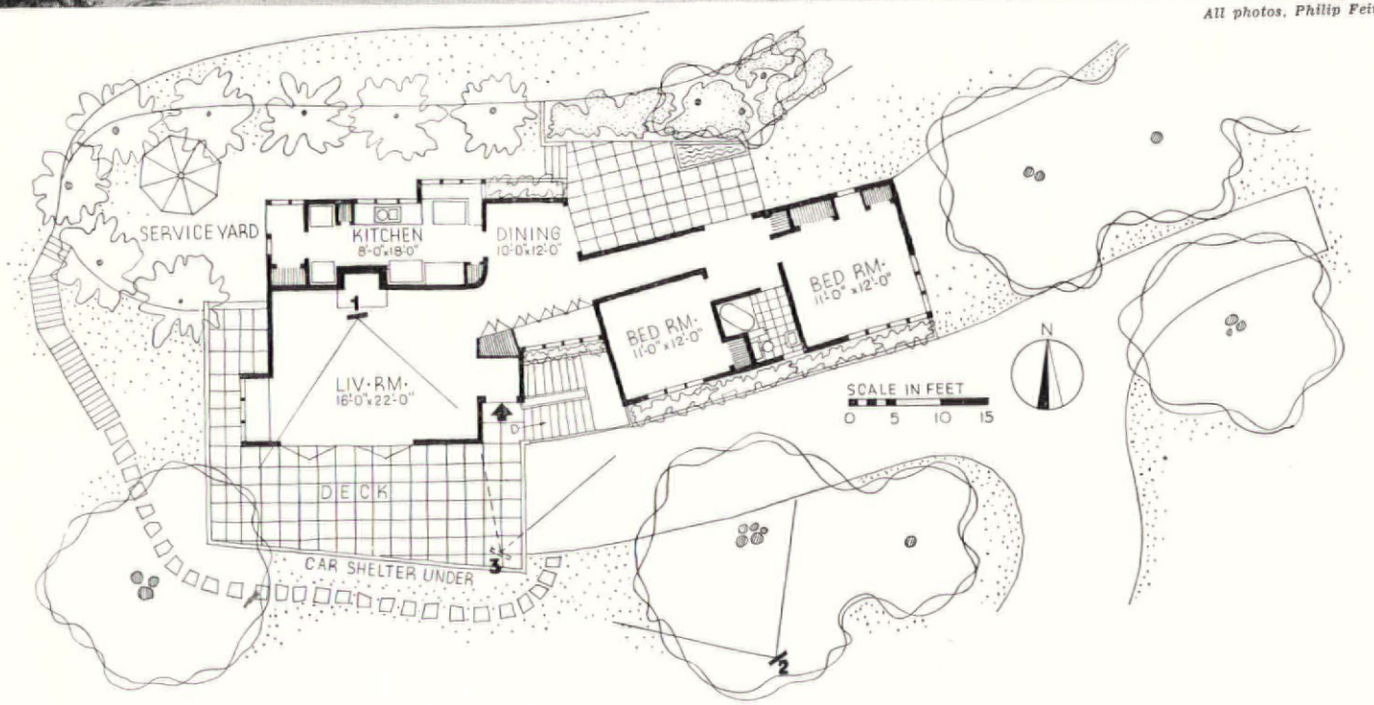


SANTA BARBARA, CALIF. CHESTER L. CARJOLA, ARCHITECT, A. I. A.



TWO BEDROOMS, SUN DECK, DINING TERRACE, CAR SHELTER

All photos, Philip Fein

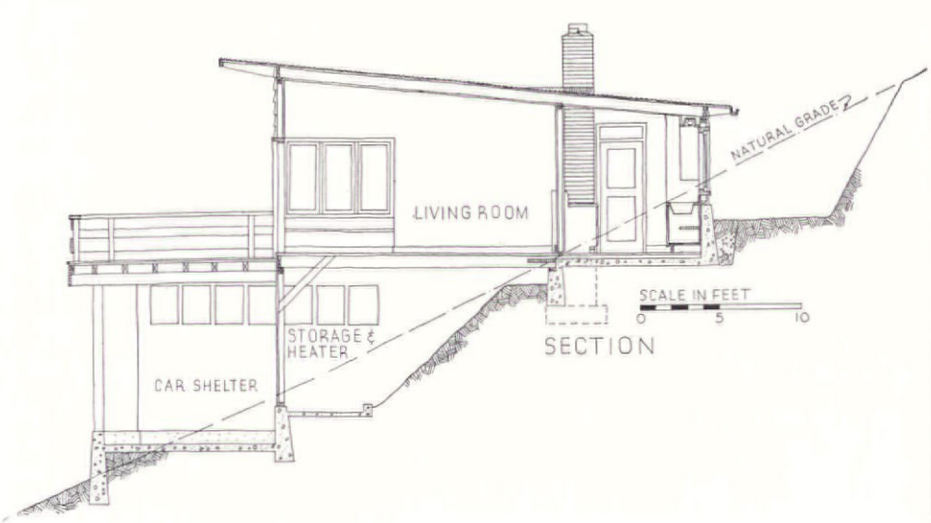


FAIRFAX, CALIF. FRANCIS E. LLOYD, ARCHITECT

Nowhere have the possibilities of regional expression in modern architecture been more excitingly realized than on the West Coast, and this recent example provides an excellent illustration. The house is by no means large, but it shows an impressive freedom in planning and breadth of treatment which take full advantage of the view and climate. Due to the steep slope the rooms are strung out in a narrow line with the deck and large openings on the south side. The dining room is merely an expansion of the corridor to the living room, with generous windows on two sides to create the desired impression of spaciousness. One of the most pleasant features is the open stair leading down from the deck to the car shelter. Cost: $8,139, Cubage: 20,200.

VIEW 1.

VIEW 2.



VIEW 3.

FRANCIS E. LLOYD, ARCHITECT

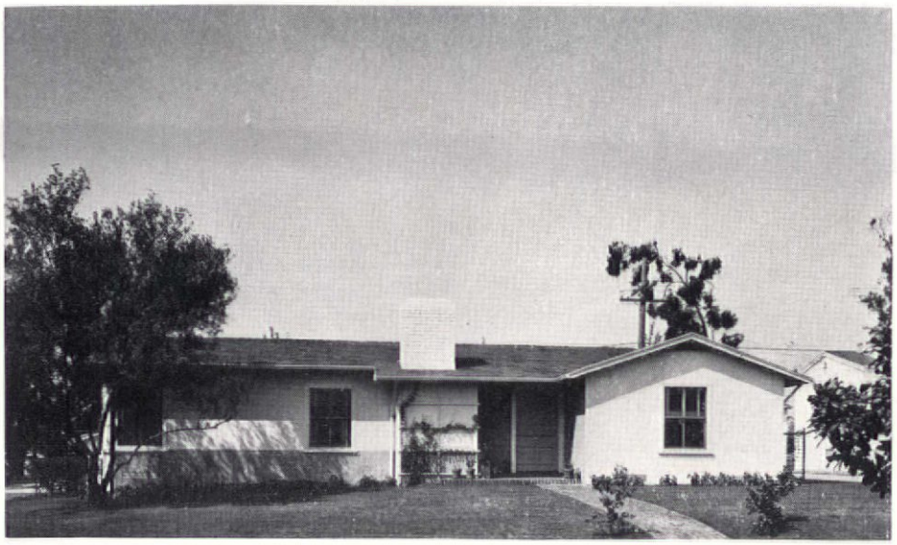
DINING

CONSTRUCTION OUTLINE

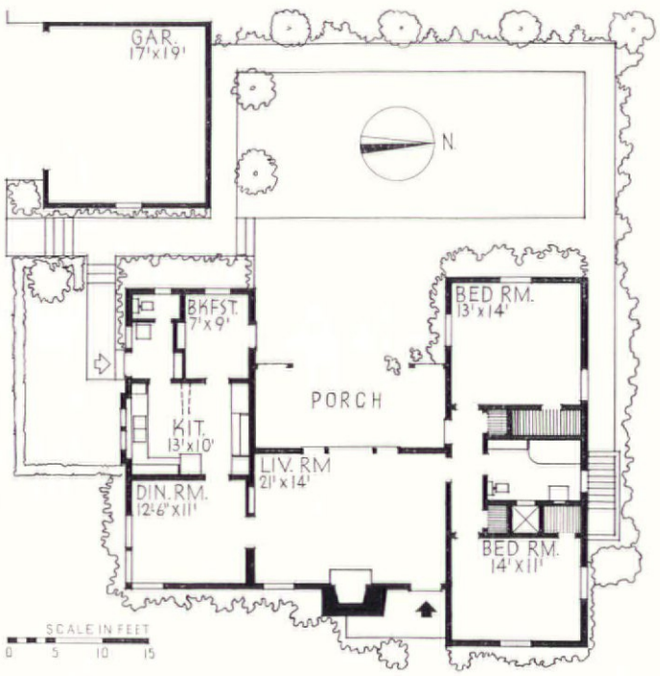
STRUCTURE: Exterior walls—wood studs, sheathing, paper, redwood Anzac siding, portions stucco over wire mesh. Floor construction—plywood under linoleum; white oak for bedrooms.
ROOF: Covered with 3-ply built-up.
SHEET METAL WORK: Flashing and leaders—galvanized iron. Gutters—redwood.
INSULATION: Ceilings—Celotex insulating lath, Celotex Corp.
WINDOWS: Sash—sugar pine, casement. Glass—Pennvernon single strength, quality B, Pittsburgh Plate Glass Co.
FLOOR COVERINGS: Linoleum, Armstrong Cork Co.
PAINTS: By National Lead Co., W. P. Fuller & Co. and Samuel Cabot, Inc.
ELECTRICAL INSTALLATION: Wiring system—knob and tube, concealed. Switches—flush tumbler.
KITCHEN EQUIPMENT: Sink—Ebco Mfg. Co. Range—Gaffers & Sattler. Refrigerator—General Electric Co. Washer—Bendix Home Appliances, Inc.
BATHROOM EQUIPMENT: By Standard Pacific Co.
PLUMBING: Supply pipes—galvanized steel. Soil pipes—cast iron. Septic tank—steel, Sanequip, Inc.
HEATING: Gas-fired warm air system, with blower. Furnace—Sunbeam, American Radiator-Standard Sanitary Corp. Water heater—Day & Night Heater Co.

LIVING

TWO BEDROOMS, BATH, BREAKFAST ROOM, DETACHED GARAGE



GLENDALE, CALIF.
WINCHTON LEAMON RISLEY
ARCHITECT, A.I.A.



The conventional U-plan, arranged on a corner lot to provide a high degree of privacy for the rear lawn and garden. The garage seems especially well placed for this purpose, serving as a very effective screen. A sheltered entry gives access to the living room, which forms the circulation link between sleeping and service wings. Located on a small hall, the one bathroom can also function as a convenient guest lavatory. Cubage: 13,593, excluding porch.

CONSTRUCTION OUTLINE

FOUNDATION: Continuous concrete.

STRUCTURE: Exterior walls—plaster on galvanized wire mesh, building paper; inside—studs, U. S. Gypsum Co. rocklath and plaster. Floor construction—sub-floor and oak finish.

ROOF: Covered with cedar shingles.

FIREPLACE: Damper—Superior Fireplace Co.

SHEET METAL WORK: Galvanized iron, 26 gauge, throughout.

WINDOWS: Sash—wood, double hung. Glass—single strength, Libbey-Owens-Ford Glass Co.

FLOOR COVERINGS: Main rooms—oak. Kitchen and bathrooms—linoleum, Armstrong Cork Co.

HARDWARE: By P. & F. Corbin.

PAINTS: By Super-Concrete Emulsions Co. and Samuel Cabot, Inc.

ELECTRICAL INSTALLATION: Wiring system—conduit. Switches—Bryant Electric Co. Fixtures—Luminaire Co.

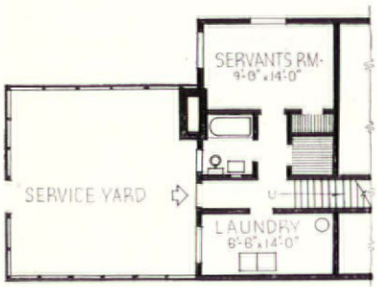
KITCHEN EQUIPMENT: Range and refrigerator—General Electric Co.

BATHROOM EQUIPMENT: By American Radiator-Standard Sanitary Corp.

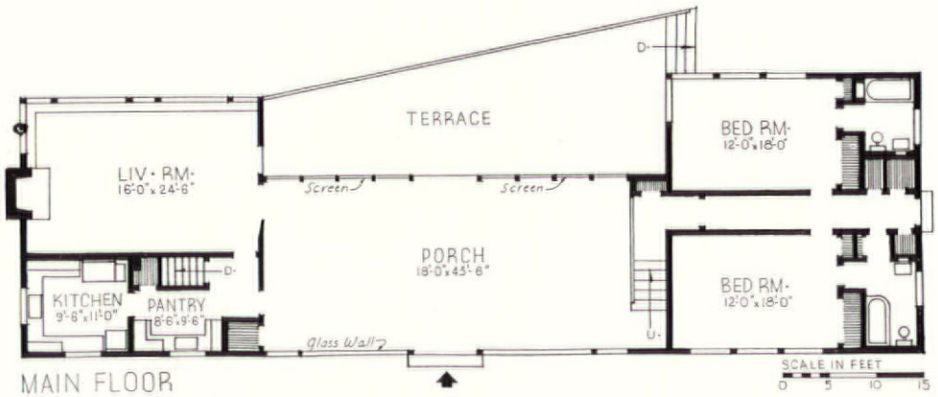
HEATING: Forced warm air system. Water heater by Mission Water Heating Co.

TWO BEDROOMS, TWO BATHS, MAID'S ROOM, ENCLOSED PORCH

All photos, Roger Sturtevant



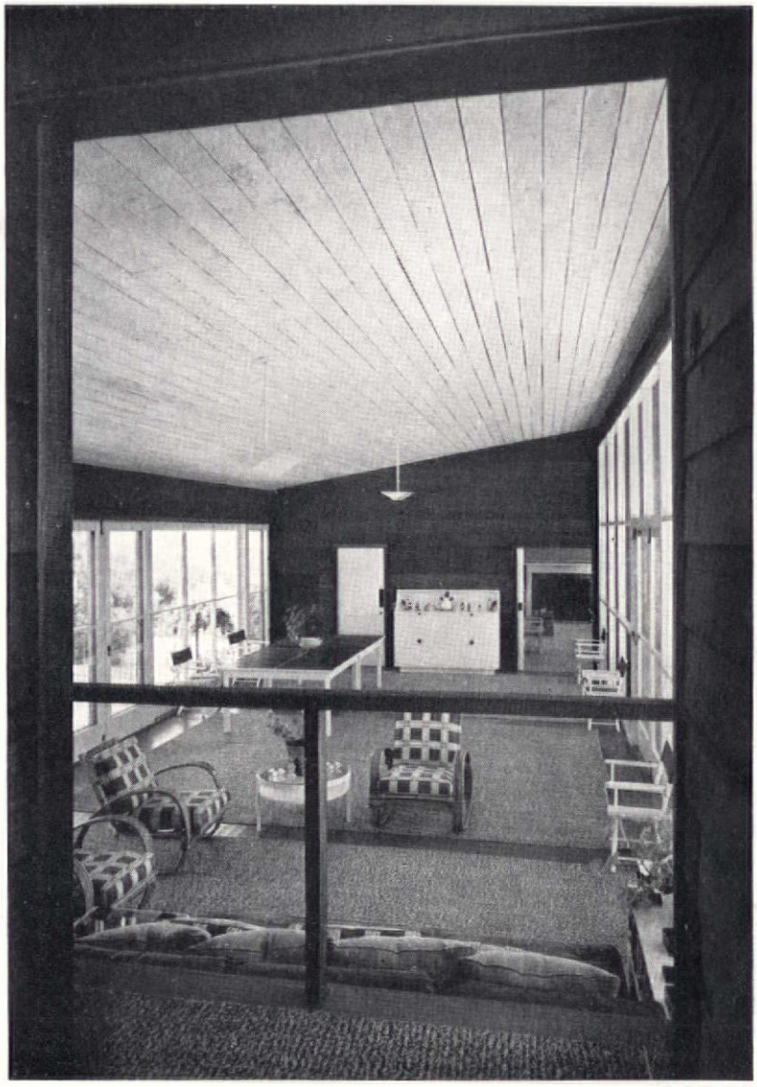
LOWER FLOOR



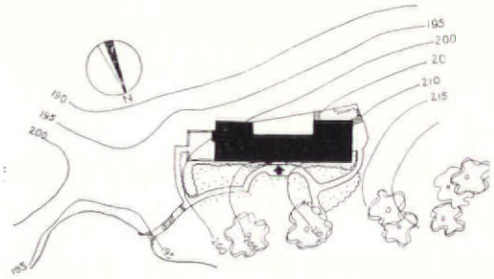
MAIN FLOOR

SARATOGA, CALIF. WILLIAM WILSON WURSTER, ARCHITECT, A. I. A.

The plan shows a most unusual scheme which is in essence two living units connected by an enclosed porch so large that it dominates the entire house. This link, which is over 40 ft. in length, becomes in effect a secondary living area for games, dining and general entertainment. Rooms throughout are generous, but are dwarfed in plan by the boldly conceived and executed porch. The exterior and interior treatment is typical of much new work in the region, with dark and light-painted wood used very effectively. A sloping lot made possible the inclusion of service facilities below the living room and kitchen. Floor area: 2,605 sq. ft.



PORCH



NORTH ELEVATION

WILLIAM WILSON WURSTER, ARCHITECT, A.I.A.

CONSTRUCTION OUTLINE

FOUNDATION: Reenforced concrete.

STRUCTURE: Exterior walls—redwood bevel siding, 15 lb. waterproof building paper, Douglas fir studs; inside—Duali plywood, U. S. Plywood Corp. and plaster.

ROOF: Covered with sheathing and shingles.

SHEET METAL WORK: Flashing,, gutters and leaders—galvanized iron.

SOUND INSULATION: All-Tite insulating quilt, Plant Rubber & Asbestos Co.

WINDOWS: Sash—double hung, sugar pine casement. Glass—single strength, quality B.

FLOOR COVERINGS: Main rooms—Douglas fir. Bathrooms—linoleum on concrete slab.

WALL COVERINGS: Living room—Duali plywood, U. S. Plywood Corp.; remainder—plaster.

WOODWORK: Douglas fir throughout.

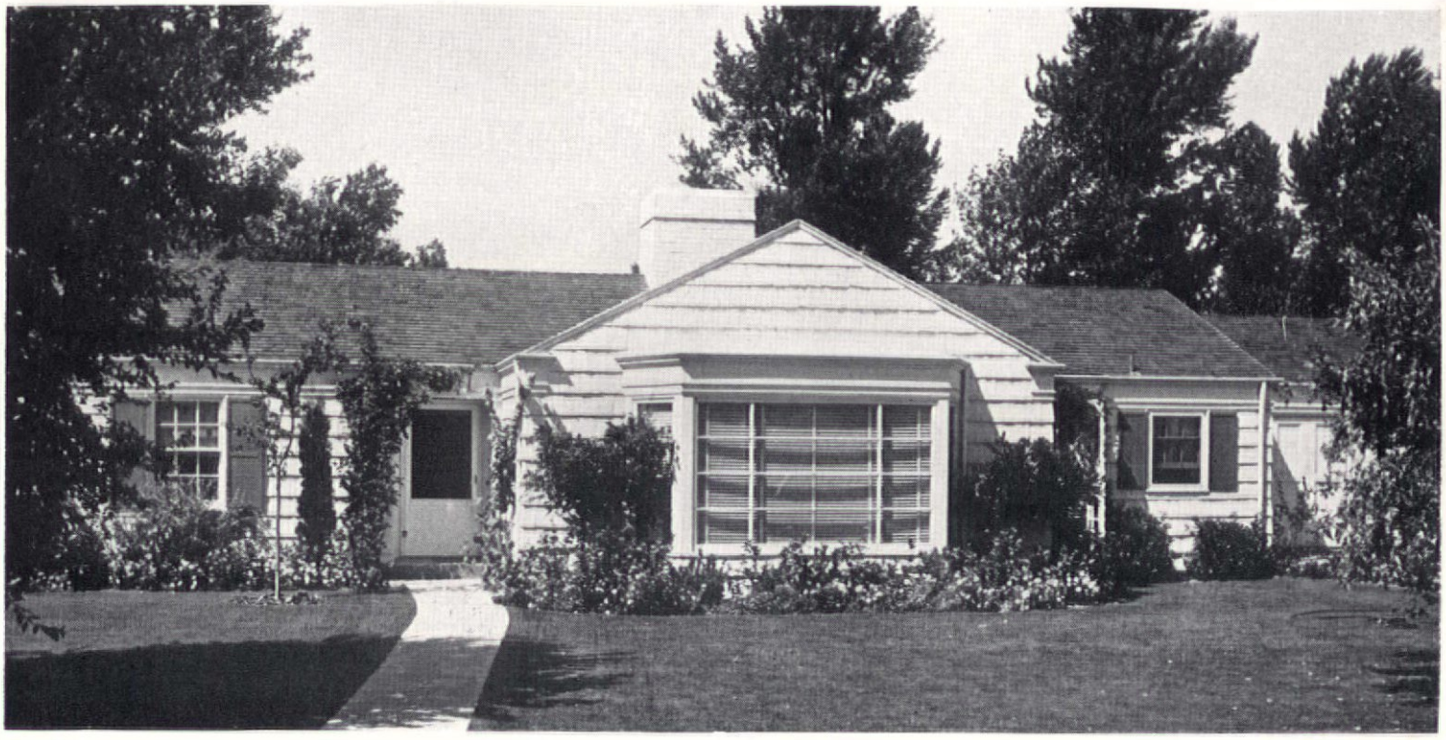
HARDWARE: By Casement Hardware Co.

ELECTRICAL INSTALLATION: Switches—Hart & Hegeman and General Electric Co. Fixtures—Hanschen & Goddard.

BATHROOM EQUIPMENT: By American Radiator-Standard Sanitary Corp.

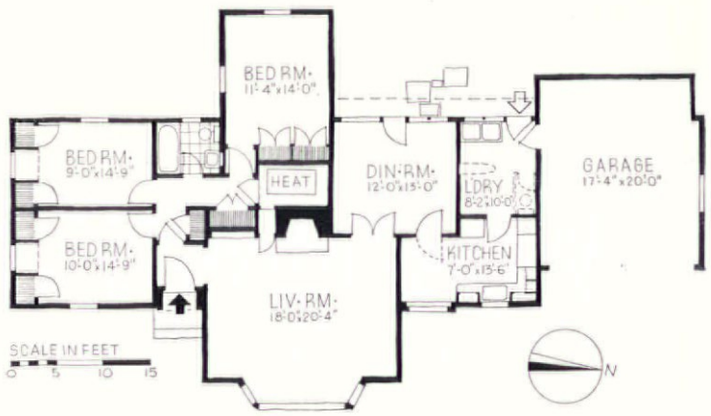
HEATING: Electric portable heaters. Water heater—Wesix, Inc.

THREE BEDROOMS, ONE BATH, DINING ROOM, LAUNDRY, ATTACHED GARAGE



Wildman

SEATTLE, WASH., WILLIAM J. BAIN, ARCHITECT, A.I.A.

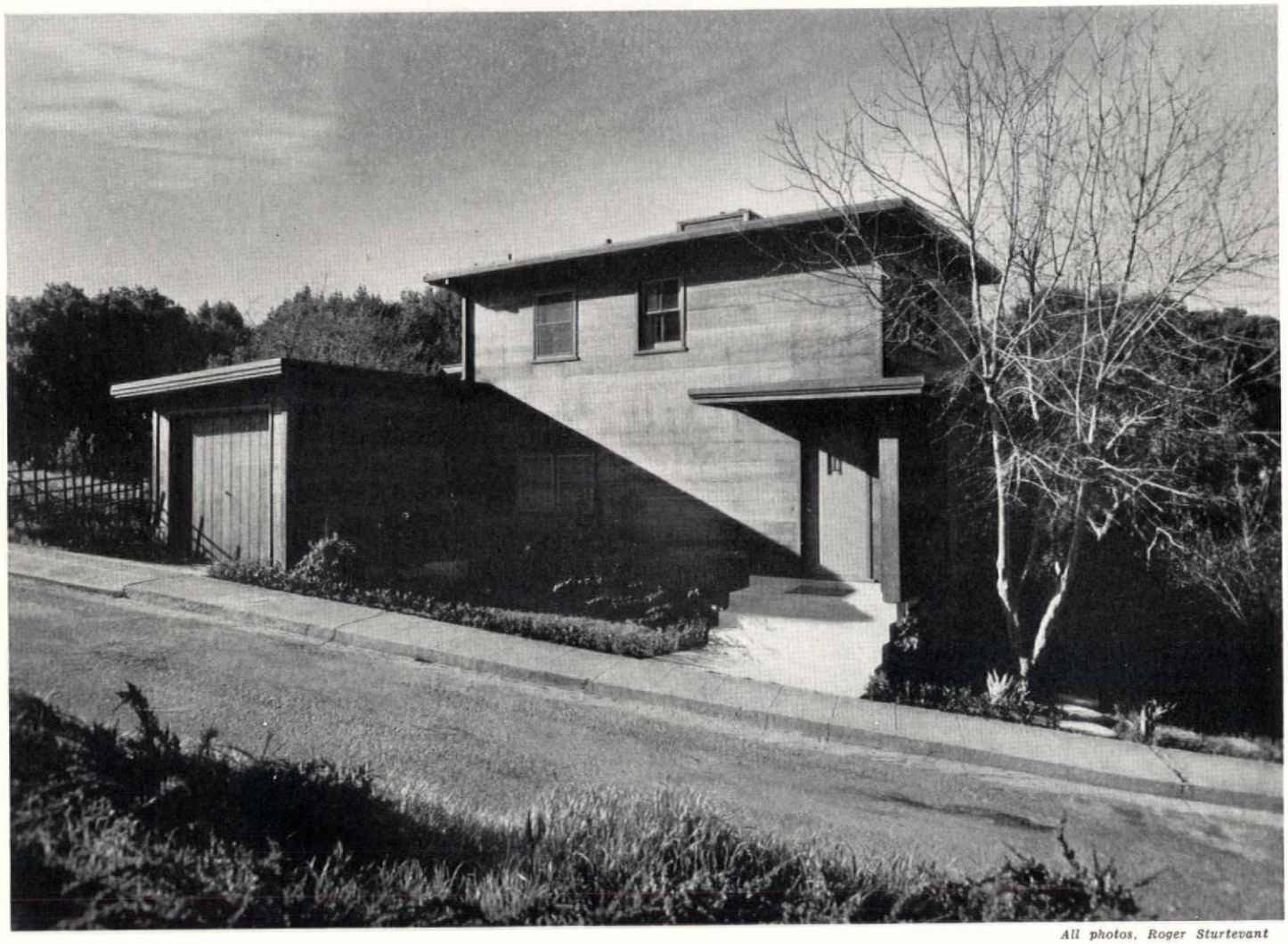


This one-story, basementless house has a centrally located heater room served by the fireplace chimney and a generous laundry and utility room opening off the kitchen. Bedrooms and bath are located in a compact group at one side of the central living room, the dining room, kitchen, laundry and garage at the other. A questionable feature is the location of the principal entrance at the bedroom side of the house, at a considerable distance from the kitchen, although this does have the advantage of providing direct access to the bedrooms and bath, without passing through the living room. Cost: $6,000. Cubage: 21,500.

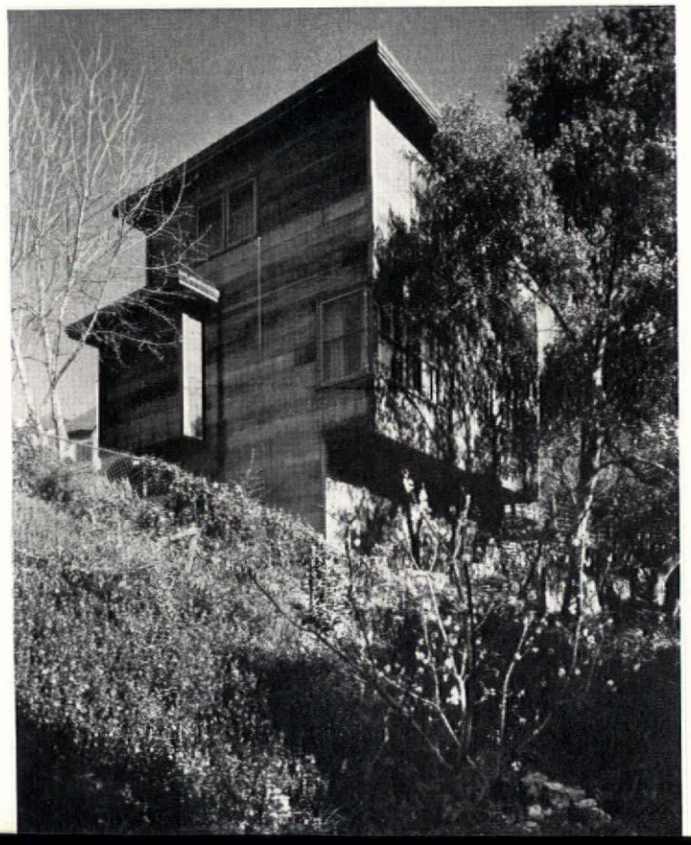
CONSTRUCTION OUTLINE

STRUCTURE: Exterior walls—handsplit cedar shakes, Brownskin paper, Angier Corp., shiplap; inside—studs, wood lath and U. S. Gypsum Co. plaster. Floor construction—sub-floor, building paper, oak finish; garage, furnace and laundry—concrete.
ROOF: Covered with cedar shingles.
FIREPLACE: Damper—Superior Fireplace Co.
SHEET METAL WORK: Armco iron, 26 gauge, throughout, American Rolling Mill Co.
INSULATION: Ceilings—2 in. Unifill, Universal Insulating Co.
WINDOWS: Sash—wood casement and double hung. Glass—single strength, quality B, Libbey-Owens-Ford Glass Co.
FLOOR COVERINGS: Main rooms—oak. Kitchen—linoleum, Armstrong Cork Co. Bathrooms—tile.
WALL COVERINGS: Main rooms—wallpaper.
WOODWORK: Fir throughout.
HARDWARE: By Yale & Towne Mfg. Co.
PAINTS: By Pittsburgh Plate Glass Co.
ELECTRICAL INSTALLATION: Wiring system—Loom wire. Switches—Bryant Electric Co.
KITCHEN EQUIPMENT: Range—General Electric Co. Refrigerator—Frigidaire Corp.
BATHROOM EQUIPMENT: By American Radiator-Standard Sanitary Corp.
PLUMBING: Soil pipes—cast iron. Hot and cold water pipes—galvanized iron. All piping by National Tube Co. Tank—National Steel Construction Co.
HEATING: Hot air system, filtering and humidifying. Thermostat—Minneapolis-Honeywell Regulator Co. Acratherm—Day & Night Heater Co.

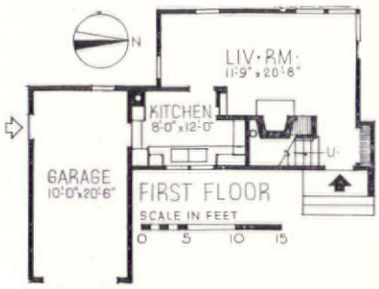
TWO BEDROOMS, ONE BATH, LIVING-DINING ROOM, ATTACHED GARAGE.

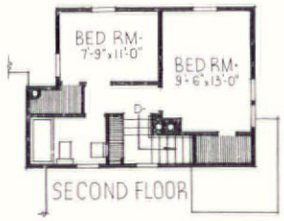


All photos, Roger Sturtevant



BERKELEY, CALIF. ELLSWORTH JOHNSON, ARCHITECT, A.I.A.





An extremely compact, low cost house designed for a steeply sloping site but equally well adapted to a level lot. The open plan of the first floor makes possible the economy of small rooms without crowding, besides saving millwork. Exterior is rough-sawn redwood, flush. Cost, $4,400.

LIVING ROOM

HALL

CONSTRUCTION OUTLINE

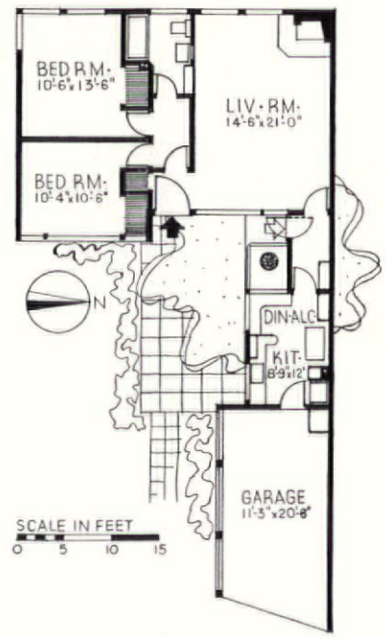
FOUNDATION: Reenforced concrete.
STRUCTURE: Exterior walls—oiled sawed redwood shiplap, building paper, Douglas fir studs; inside—plaster and California stucco. Floor construction—white oak. Ceilings (2nd floor) exposed joists, shiplap roof boarding.
ROOF: Composition covered with crushed brick.
SHEET METAL WORK: Flashings and cornices—copper.
WINDOWS: Sash—double hung, sugar pine, Unique Window Balance Co. balances. Glass—single strength, quality B, Libbey-Owens-Ford Glass Co.
FLOOR COVERINGS: Kitchen—linoleum.
HARDWARE: By Russell & Erwin Mfg. Co.
PAINTS: By Samuel Cabot, Inc. and E. I. Du Pont de Nemours, Inc.
ELECTRICAL INSTALLATION: Wiring system—knob and tube.
PLUMBING FIXTURES: By American Radiator-Standard Sanitary Corp.
HEATING: Gas fired, central, hot air furnace. Thermostat—Minneapolis-Honeywell Regulator Co. Grilles—Hart & Cooley.

TWO-BEDROOM, ONE-STORY HOUSE PLANNED AROUND A TREE

Sonya Noskourak Photos

CARMEL, CALIF.
MARIO CORBETT, ARCHITECT

This very small house shows a distinct Japanese influence, and the impression is accentuated by the magnificent tree which has been incorporated into the plan. The manner in which the rooms have been arranged is particularly interesting: the living and sleeping rooms form a compact rectangle which contains most of the area of the house; beyond is a long, narrow wing of the kitchen and attached garage. While very economical, the scheme produced a house which bears little resemblance to the conventional one-story box. Cost: $5,300. Cubage: 14,000.

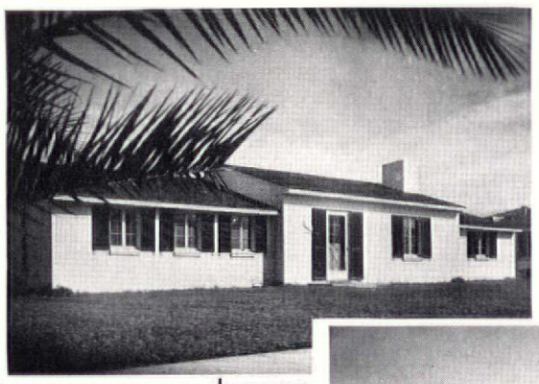


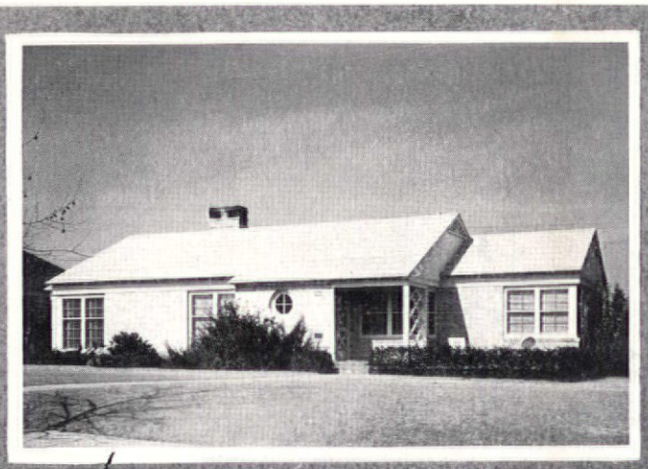
CONSTRUCTION OUTLINE

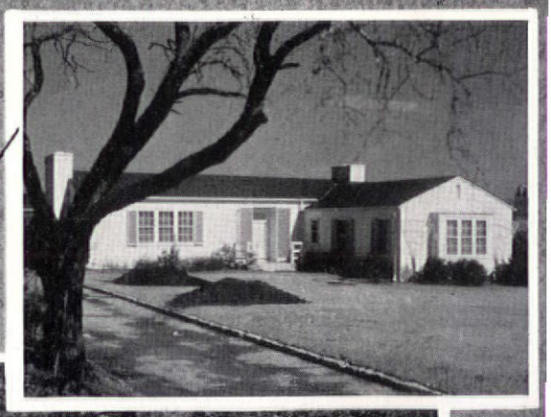
STRUCTURE: Exterior walls—wood siding, building paper, O. P. sheathing and studs, wood and metal lath; inside—plaster and U. S. Plywood Corp. mahogany plywood.
ROOF: Covered with cedar shingles.
FIREPLACE: Damper—Superior Fireplace Co.
SHEET METAL WORK: Flashing, leaders and ducts—galvanized iron, Columbia Steel Co. Gutters—redwood.
WINDOWS: Sash—sugar pine casement, double hung and fixed. Glass—Pennvernon, Pittsburgh Plate Glass Co., double and single strength. Weatherstripping — Chamberlin Metal Weatherstrip Co.
FLOOR COVERINGS: Main rooms — oak. Kitchen and bathrooms—linoleum, Armstrong Cork Co.
HARDWARE: By P. & F. Corbin.
PAINTS: By W. P. Fuller Co.
KITCHEN EQUIPMENT: Range—Wedgewood, James Graham Mfg. Co. Refrigerator —General Electric Co. Sinks—American Radiator-Standard Sanitary Corp.
BATHROOM EQUIPMENT: By American Radiator-Standard Sanitary Corp.
PLUMBING: Soil pipes—cast iron. Hot and cold water pipes—galvanized iron.
HEATING: Warm air system, summer switch, fan control. Water heater—Day & Night Heater Co.

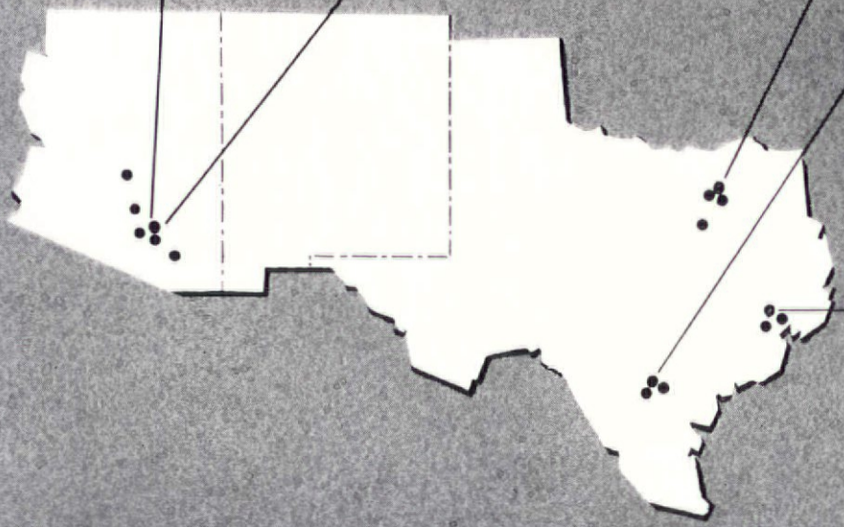
SOUTHWEST

A hot, dry climate with mild winters. The chief problem is one of ventilation and shelter from the sun rather than of heating. Flat building sites are practically universal, and have produced a house type quite different from those of California, in some parts of which similar climatic conditions prevail. Use of air conditioning equipment is widespread and basements are customarily omitted. Texas has been enjoying a period of relative prosperity, and home building has been active. In the large cities a wide assortment of building products is available. In Arizona and New Mexico the extremely low population density has placed a premium on native materials, chiefly adobe, whose use has marked advantages in this climate.

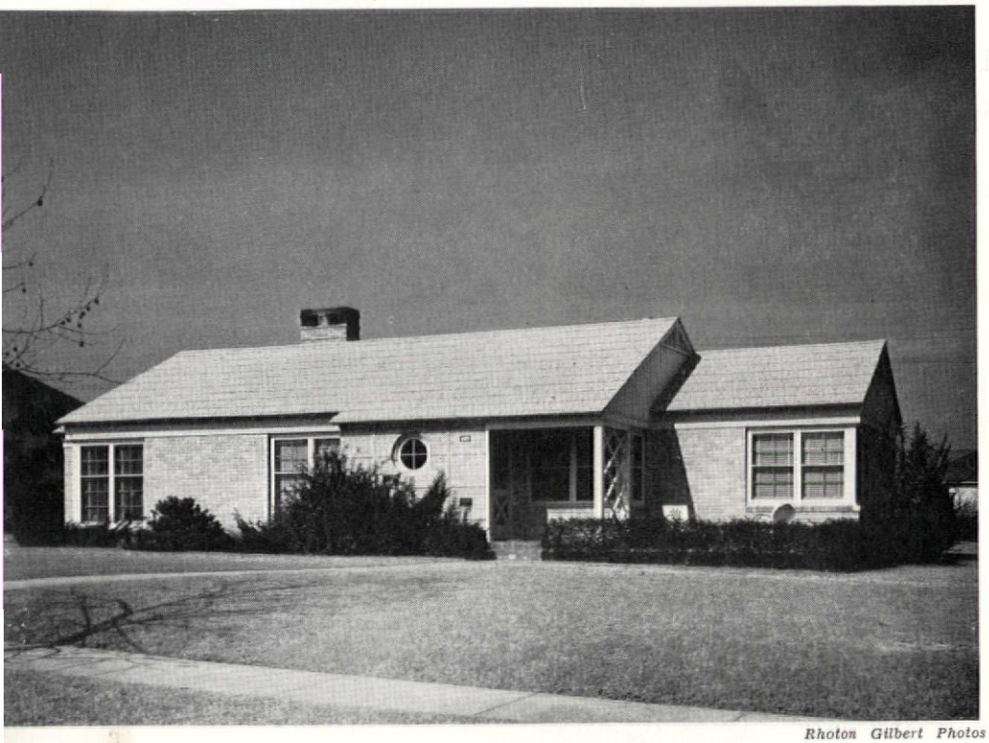








TWO BEDROOMS, ONE BATH, LIVING-DINING ROOM

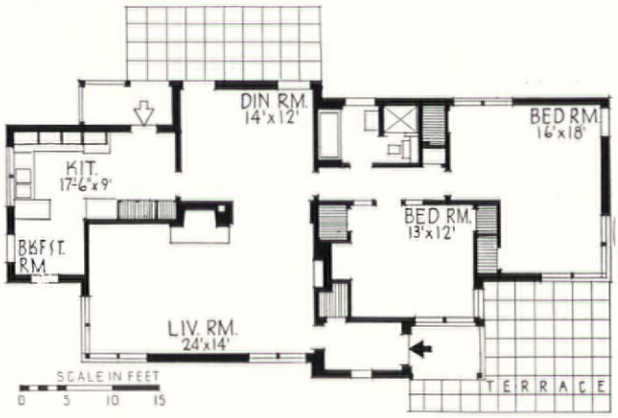


Rhoton Gilbert Photos

DALLAS, TEXAS

ARTHUR E. THOMAS ARCHITECT, A.I.A.

The clean lines and sleek treatment of this single-story house are typical of a simplified "ranch house" style which is growing up in the Southwest—a style which is playing an important part in the tendency of modern and conventional to merge in an approach minus the excesses of both. The generous, open plan employs an L-shaped living-dining room, divided by the chimney breast, to provide the through ventilation so essential in this locality. Similar shapes are boldly and successfully used in the kitchen and principal bedroom for the same purpose, while the door to the other bedroom, which has but one exposure, is flanked by fixed louvres. Cost: $7,900. Cubage: 23,000.



CONSTRUCTION OUTLINE

FOUNDATION: Reenforced concrete.
STRUCTURE: Exterior walls—brick veneer, studs, sheathing; inside—wood studs finished both sides with Masonite board and Presdwood, Masonite Corp. Floor construction—wood joist, sub-floor, hardwood finish.
ROOF: Covered with red cedar shingles.
FIREPLACE: Damper—Peerless Mfg. Co.
SHEET METAL WORK: Flashing—galvanized iron.
WINDOWS: Sash—double hung. Glass—double strength, quality A.
FLOOR COVERINGS: Main rooms—hardwood. Kitchen and bathrooms—rubber.
WOODWORK: Trim and cabinets—pine. Doors—slab and built-up.
HARDWARE: By Yale & Towne Mfg. Co.
PAINTS: By Jones-Blair Paint Co.
ELECTRICAL INSTALLATION: Wiring system—conduit. Switches—tumbler, General Electric Co.
KITCHEN EQUIPMENT: Range, refrigerator, dishwasher and disposal unit—General Electric Co.
BATHROOM EQUIPMENT: By Kohler Co.
PLUMBING: Soil pipes—cast iron. Hot and cold water pipes—Streamline, Mueller Brass Co.
HEATING: Floor furnace, Moncrief, Henry Furnace & Foundry Co.

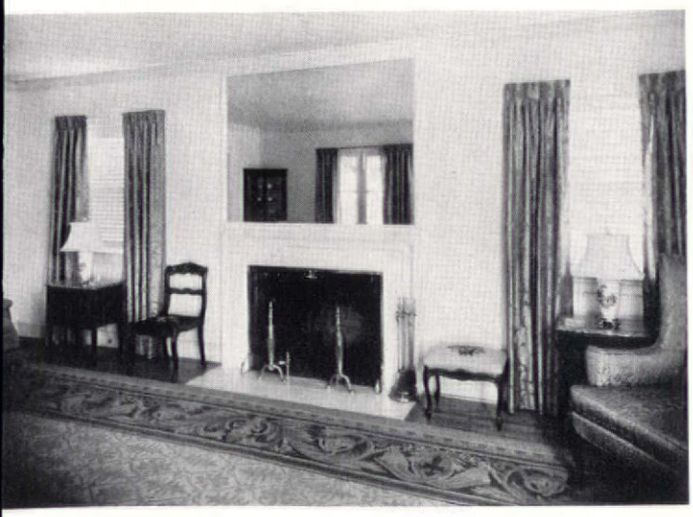
THREE BEDROOMS, TWO BATHS, BREAKFAST ROOM, ROOF DECKS

Tessie Dickeson

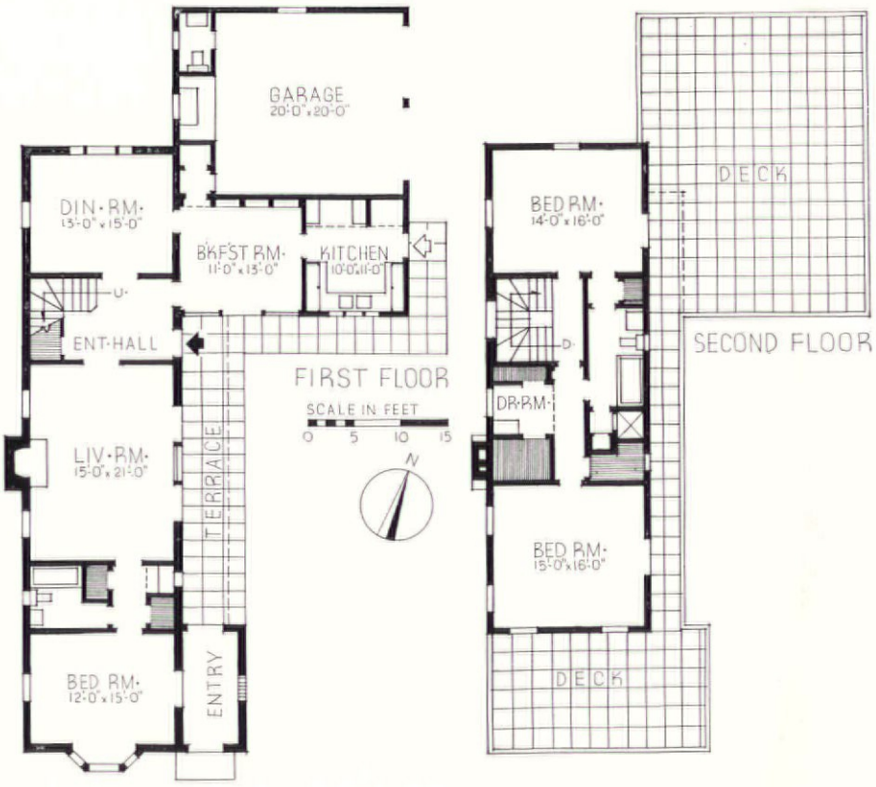
CORSICANA, TEX. I. GAYDEN THOMPSON, ARCHITECT, A. I. A.

CONSTRUCTION OUTLINE

STRUCTURE: Exterior walls—brick veneer on frame; inside—studs and U. S. Gypsum Co. plaster on Wheeling Steel Corp. metal lath.
ROOF: Covered with Cop-R-Loy, Wheeling Steel Corp. Deck—covered with Paroid cap sheet, Bird & Son, Inc.
INSULATION: Roof—insulating wool, Eagle-Picher Lead Co.
WINDOWS: Sash—double hung, white pine. Glass—single strength, quality A.
FLOOR COVERINGS: Main rooms—oak. Kitchen—linoleum on pine, Armstrong Cork Co. Bathrooms — tile, Cambridge Tile Co.
HARDWARE: By Richard Wilcox Mfg. Co. and Schlage Lock Co.
ELECTRICAL INSTALLATION: Switches—Bryant Electric Co. Fixtures—Chase Brass & Copper Co.
KITCHEN EQUIPMENT: Range — Universal, Landers, Frary & Clark. Refrigerator—General Electric Co.
BATHROOM FIXTURES: By Crane Co.
PLUMBING: Hot and cold water pipes —copper, Mueller Brass Co.
HEATING: Floor furnaces, thermostatic control, Moncrief, Henry Furnace & Foundry Co. Water heater—Crane Co.

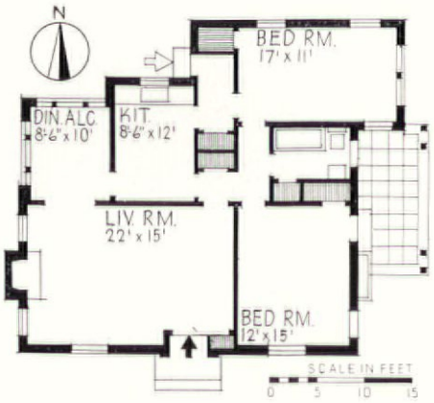


The chief problem here, according to the architect, was one of planning. It involved the proper orientation of rooms on a narrow lot, and maximum privacy for the living areas. The solution is an elongated plan with its end facing the street. Location of the garage at the rear of the lot might be questioned if it were not for the importance given to use of its roof. Separation of sleeping rooms in two units follows a growing and highly commendable practice. Cost: $12,486. Cubage: 27,221.



TWO BEDROOMS, ONE BATH, DINING ALCOVE, NO BASEMENT

Stauffer

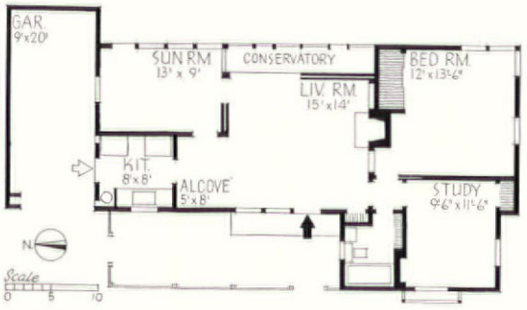


SAN ANTONIO, TEX. ATLEE B. & ROBERT M. AYRES, ARCHITECTS, A.I.A.

Two interesting variations of the two-bedroom, low cost plan which show the advantages of individualized design. The upper plan provides a convenient cross-connection between service and sleeping portions in the form of a joint hall, and a service vestibule at the rear. The lower plan shows an excellent treatment of the living area, with an unusual window-conservatory separated from the living room by a glazed, sliding partition. Upper house. 15,665 cu. ft., cost, $6,681; lower house, 10,000 cu. ft., cost $3,500.

. . . SUN ROOM, ATTACHED GARAGE

Paul Peters

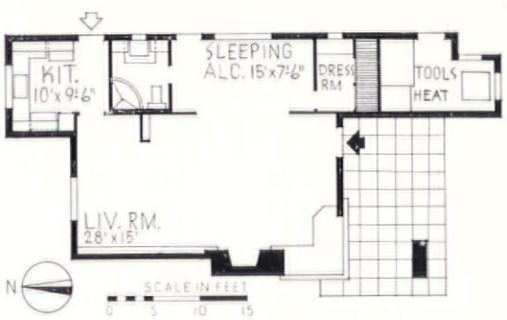


HOUSTON, TEX. TALBOTT WILSON & IRWIN MORRIS, ARCHITECTS, A.I.A.

SLEEPING ALCOVE, DRESSING CLOSET, LIVING-DINING ROOM, NO BASEMENT

An unusually compact plan suitable for a couple without children, with the major part of the space devoted to a large living-dining room and curtained sleeping alcove, flanked by a dressing closet and bath. Walls are poured rubble-concrete, interior partitions, redwood. Cost, $3,000, cubage 9,500.

PHOENIX, ARIZ. F. WALLIS WHITTLESEY, ARCHITECT, A.I.A.



HOUSE IN SAN ANTONIO, TEXAS

STRUCTURE: Exterior walls—common brick veneer, studs, sheathing, waterproof felt; inside—metal lath and plaster or knotty pine. Floor construction—sub-floor, felt, oak finish.
ROOF: Covered with cedar shingles.
FIREPLACE: Damper—H. W. Covert Co.
SHEET METAL WORK: Galvanized iron, Armco, throughout, American Rolling Mill Co.
INSULATION: Attic floor—Balsam wool, Wood Conversion Co. Weatherstripping—Chamberlin Weather Strip Co.
WINDOWS: Sash—double hung, pine. Glass—double strength, quality B, Libbey-Owens-Ford Glass Co.
FLOOR COVERINGS: Main rooms—oak. Kitchen—linoleum, Armstrong Cork Co. Bathrooms—tile.
WOODWORK: Pine throughout. Garage doors—cypress, Overhead Door Co.
HARDWARE: By Russell & Erwin Mfg. Co.
PAINTS: By Devoe & Raynolds and General Paint Co.
ELECTRICAL INSTALLATION: Wiring system—galvanized iron conduit. Switches—toggle, Harvey Hubbell, Inc.
KITCHEN EQUIPMENT: Range—Magic Chef, American Stove Co. Refrigerator—Frigidaire Corp.
BATHROOM EQUIPMENT: By American Radiator-Standard Sanitary Corp.
PLUMBING: Hot and cold water pipes—galvanized wrought iron, A. M. Byers Co.
HEATING: Wall heaters in bedrooms and baths.

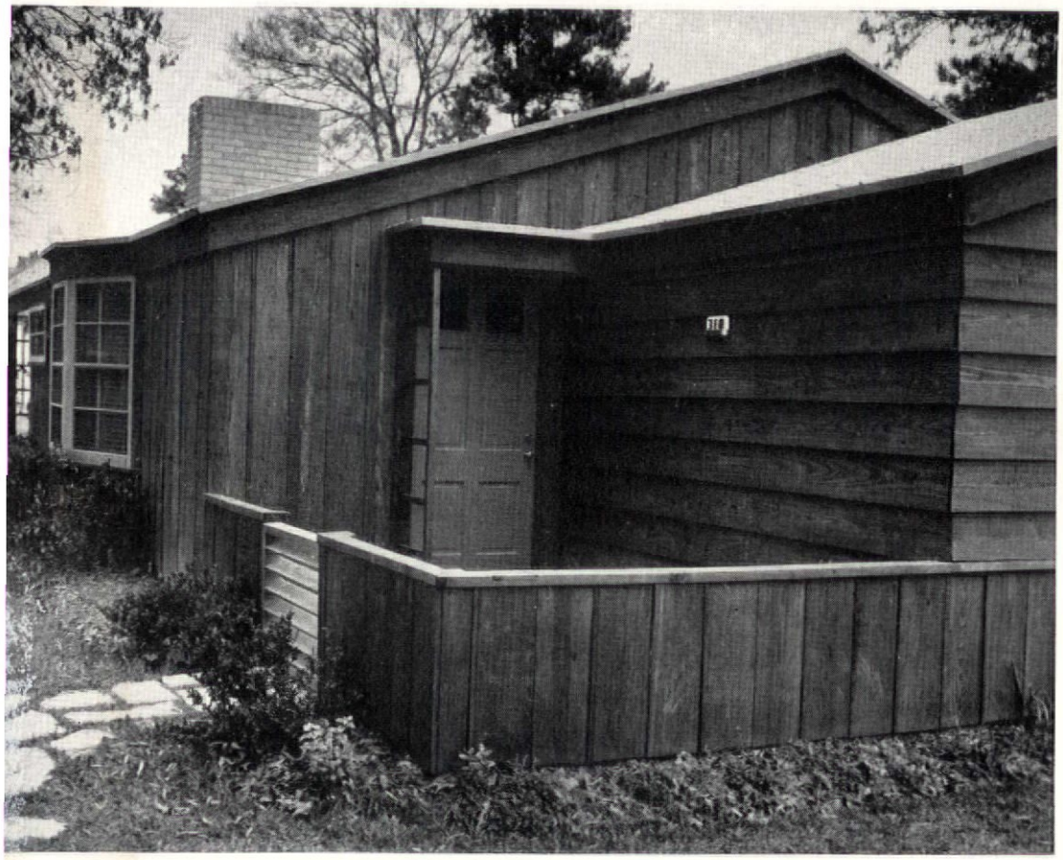
HOUSE IN HOUSTON, TEXAS

STRUCTURE: Exterior walls—studs, lath, No. 1 Perfection shingles; inside—U. S. Gypsum Co. Starliner board and white pine. Floor construction—wood joists, finished flooring.
ROOF: No. 1 Perfection shingles.
SHEET METAL WORK: Flashing—26 gauge galvanized iron.
INSULATION: Roof—rockwool, Johns-Manville. Weatherstripping—Monarch Metal Weatherstrip Co.
WINDOWS: Sash—white pine, double hung. Glass—single strength, quality B. Screens—Rolscreen Co.
FLOOR COVERINGS: Main rooms—Amhaco broadfelt, Wornack Mills. Kitchen and bathrooms—linoleum.
WALL COVERINGS: Living room, bedrooms and halls—wallpaper. Study—pine veneer. Kitchen—Flexboard, Johns-Manville. Bathrooms—J-M Flexboard and tile.
HARDWARE: By P. & F. Corbin.
ELECTRICAL INSTALLATION: Wiring system—4 circuit multibreaker. Switches—Hart & Hegeman.
KITCHEN EQUIPMENT: Range—Eagle Foundry.
Refrigerator—Westinghouse Electric & Mfg. Co. Sink and cabinets—Acme Metal Products Corp.
BATHROOM EQUIPMENT: By Kohler Co.
PLUMBING: Soil pipes—cast iron. Hot and cold water pipes—galvanized.
HEATING: Hot air wall furnace.

HOUSE NEAR PHOENIX, ARIZ.

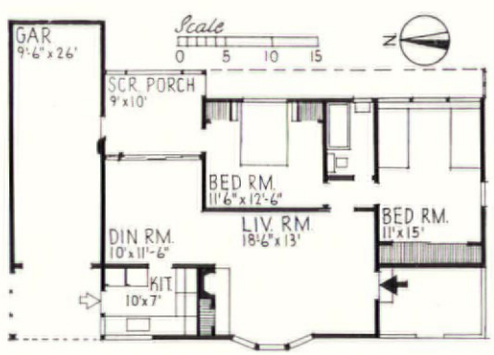
FOUNDATION: Reenforced concrete.
STRUCTURE: Exterior walls—poured rubble concrete. Interior partitions—clear redwood. Floor construction—rough concrete, sand fill.
ROOF: Covered with Pabco Alumishield, aluminum surfaced built-up, Paraffine Cos.
SHEET METAL WORK: Flashing and ducts—Armco, American Rolling Mill Co.
INSULATION: Roof—Celotex, Celotex Corp.
WINDOWS: Sash—casement, Truscon Steel Co. Glass—quality B, Pittsburgh Plate Glass Co.
WALL COVERINGS: Unfinished concrete: redwood on some paneled partitions.
HARDWARE: Brass.
PAINTS: By Sherwin-Williams Paint Co.
ELECTRICAL INSTALLATION: Wiring system—thin wall conduit. Switches—Hart & Hegeman.
KITCHEN CABINETS: Knotty pine, sugar pine counter.
BATHROOM EQUIPMENT: By American Radiator-Standard Sanitary Corp.
PLUMBING: Galvanized iron pipes. Pump—The F. E. Myers & Bros. Co.
HEATING: Locally made solar heater; provision for future forced warm air heating and cooling. Boiler—gas fired.

TWO BEDROOMS, ONE BATH, DINING ROOM, ATTACHED GARAGE, NO BASEMENT



HOUSTON, TEX. TALBOTT WILSON & IRWIN MORRIS, ARCHITECTS, A.I.A.

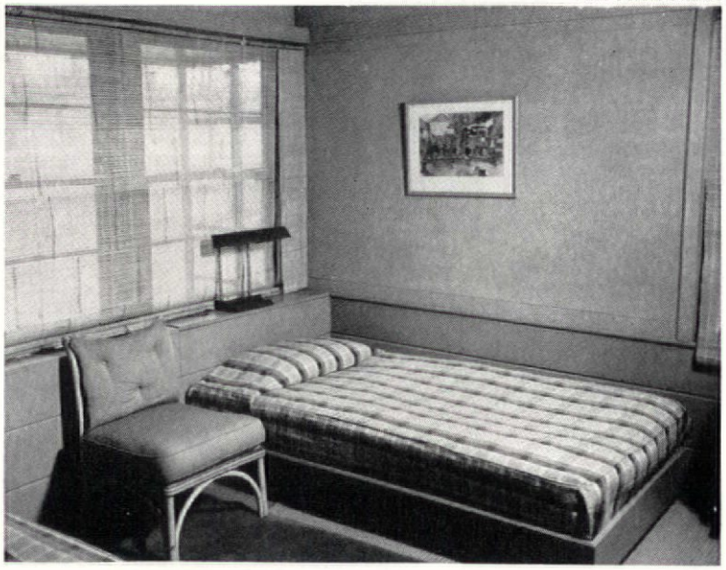
Open planning and modernized details here combine with a generally conventional scheme to produce a compact, attractive, and livable low cost house. A screened porch, separated from the dining room by sliding, glazed doors, provides a sheltered space for outdoor living; beds and bedroom cupboards are built in; exterior natural finish vertical shiplap and clapboards. Cost: $3,500. Cubage: 10,000.



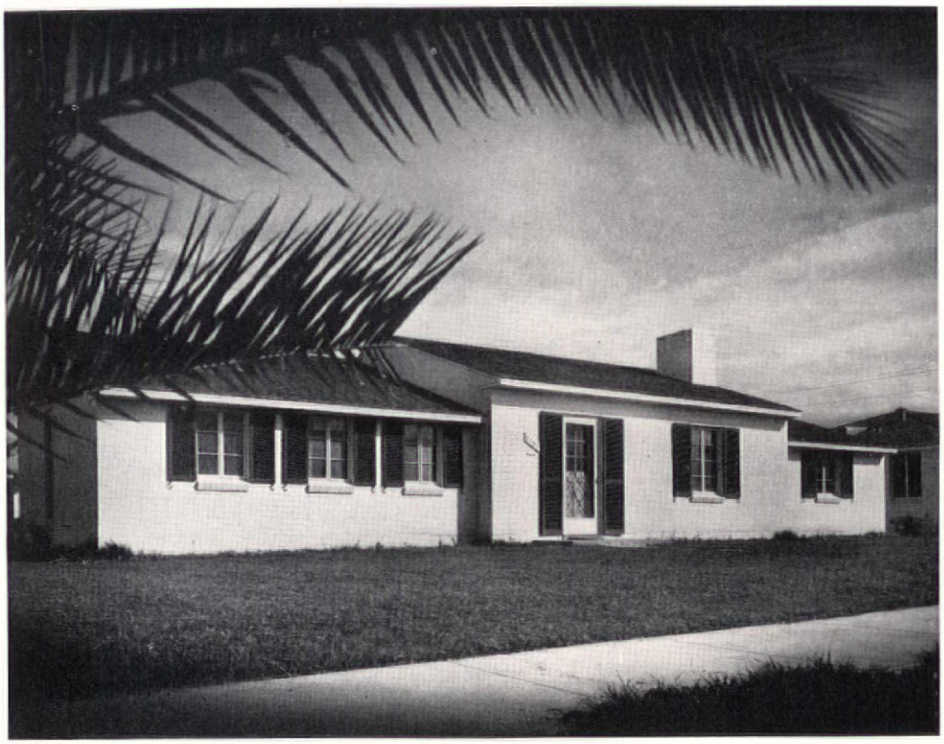
CONSTRUCTION OUTLINE

FOUNDATION: Reenforced concrete slab on 10 x 10 in. beams at 10 ft. intervals both ways. Waterproofing—15 lb. felt, Texas Co. mopped down with asphalt.
STRUCTURE: Exterior walls—studs, shiplap sheathing; inside—U. S. Gypsum Co. Sheetrock and plaster; one bedroom—Celotex, Celotex Corp. Floor construction—wood joists and finished flooring.
ROOF: Covered with 20-yr. composition roofing.
SHEET METAL WORK: Flashing—26 gauge galvanized iron.
INSULATION: Attic floor and roof—rockwool, Johns-Manville. Weatherstripping—Monarch Metal Weatherstrip Co.
WINDOWS: Sash—double hung, white pine. Glass—single strength.
FLOOR COVERINGS: Main rooms—Amhaco broadfelt, Wornack Mills. Kitchen and bathrooms—linoleum.
WALL COVERINGS: Bedrooms and halls—wallpaper. Kitchen—veneer and Flexboard, Johns-Manville. Bathrooms—tile.
WOODWORK: Interior doors—fir; remainder—white pine.
HARDWARE: By P. & F. Corbin.
ELECTRICAL INSTALLATION: Multibreaker—4 circuit. Switches—Hart & Hegeman.
KITCHEN EQUIPMENT: Range—Eagle Foundry. Refrigerator—Westinghouse Electric & Mfg. Co. Sink and cabinets—Acme Metal Products Co.
BATHROOM EQUIPMENT: By Kohler Co.
PLUMBING: Soil pipes—cast iron. Water pipes—galvanized iron.
HEATING: Gas steam radiation.

Paul Peters Photos

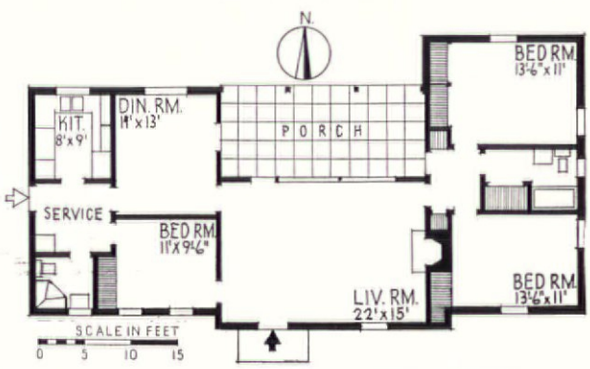


THREE BEDROOMS, TWO BATHS, SEPARATE DINING ROOM



Composed of three distinct units surrounding and opening on to a living porch at the back, this house has its third bedroom in the kitchen-dining wing, arranged for use as either a maid's room or guest room. Slat shutters, useful as well as ornamental in a region of baking suns, give the exterior a Georgian air, carried out in the cornice and other details. Walls are brick, painted. Cost: $6,286. Cubage: 15,941.

HOUSE IN TUCSON, ARIZ. RICHARD A. MORSE AND ARTHUR T. BROWN, ARCHITECTS, A.I.A.



Maynard L. Parker Photos

CONSTRUCTION OUTLINE

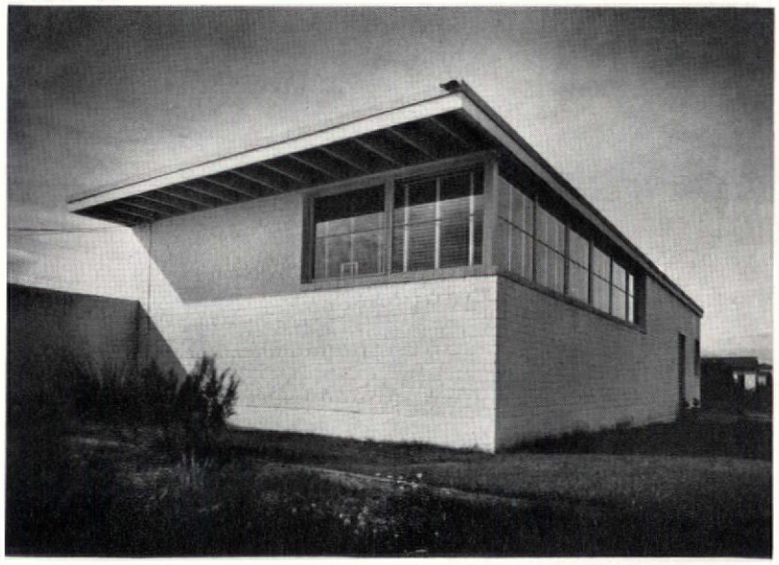
STRUCTURE: Exterior walls—8 in. common brick; inside—2 coats plaster. Interior partitions—Douglas fir studs, rock lath and plaster. Floor construction—sub-floor, oak finish.
ROOF: Covered with red cedar shingles.
FIREPLACE: Damper—Majestic Co.
INSULATION: Roof—glass wool, U. S. Gypsum Co.
WINDOWS: Sash—Druwhit Co. and Truscon Steel Co. Glass—single strength, quality B, American Window Glass Co.
FLOOR COVERINGS: Kitchen and bathrooms—linoleum over concrete, Armstrong Cork Co.; one bath—tile, National Tile Co.
HARDWARE: By Schlage Lock Co. and Hall Mfg. Co.
PAINTS: By W. P. Fuller & Co.
ELECTRICAL INSTALLATION: Wiring system—metallic tubing and flexible armored cable. Multibreaker—Square D. Co. Switches—tumbler, Bryant Electric Co. Fixtures—Lightolier Co.
KITCHEN EQUIPMENT: Range and refrigerator—Frigidaire Corp.
BATHROOM EQUIPMENT: By American Radiator-Standard Sanitary Corp. Cabinets—Hallenscheid & McDonald.
PLUMBING: Soil pipes—cast iron. Hot and cold water pipes—galvanized steel.
HEATING AND AIR CONDITIONING: Automatic forced warm air, gas fired; ducts provided for future air cooling system, Race Air Conditioning Co. Grilles—Waterloo Register Co. Water heater—American Radiator-Standard Sanitary Corp.

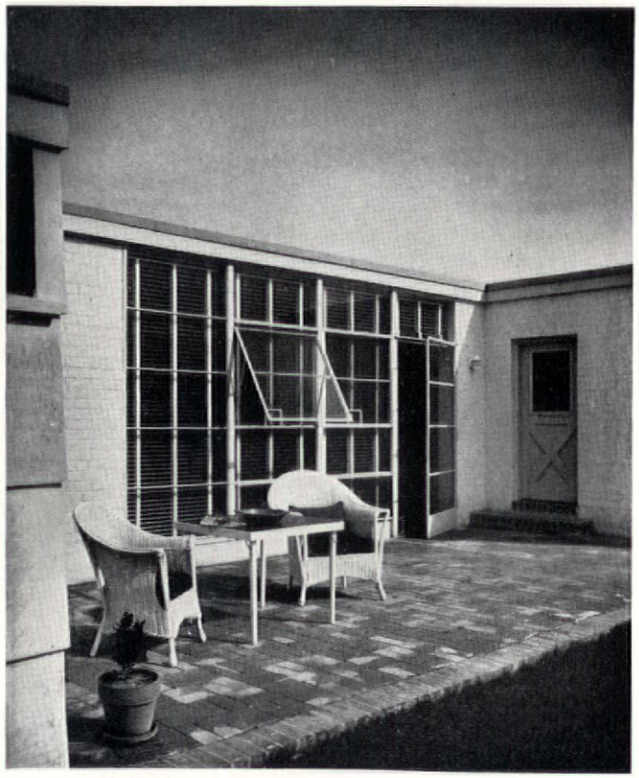
THREE BEDROOMS, ONE BATH, LIVING-DINING ROOM, GARAGE

VIEW 1.

Maynard L. Parker Photos

VIEW 2.

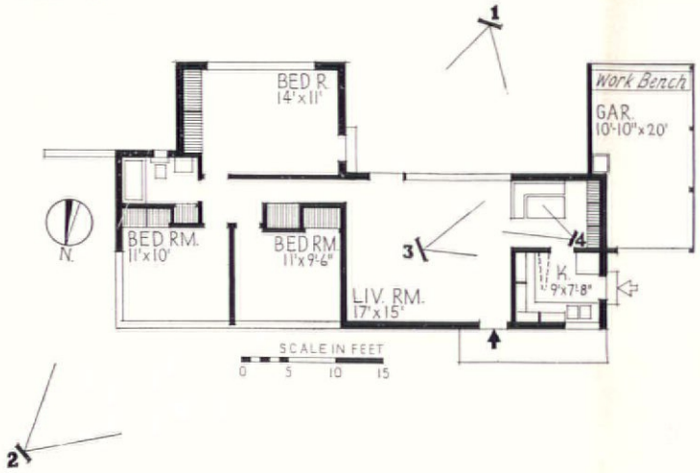




TUCSON, ARIZ. RICHARD A. MORSE AND ARTHUR T. BROWN, ARCHITECTS, A.I.A.

Exceptionally well planned and finished, this little house is a vivid demonstration of the practical advantages of applying the modern approach to the low cost field. The compact kitchen and dining alcove, the triple-purpose carport, workshop and laundry, and the sheltered outdoor living area have all been achieved solely by thoughtful design and at no increase in cost; a high-silled ribbon window provides plenty of light and air for the two front bedrooms without destroying their privacy; the glazed sidewall of the small living room gives an effect of spaciousness. Cost: $5,075. Cubage: 11,089.

VIEW 3.



VIEW 4.

CONSTRUCTION OUTLINE

STRUCTURE: Exterior walls—8 in. common brick; inside—2 coats plaster. Interior partitions—studs, plaster on rocklath, U. S. Gypsum Co. Floor—concrete slab, laid on earth fill.

ROOF: Covered with 10 yr. built-up white asbestos cap sheet, Philip Carey Co.

SHEET METAL WORK: Galvanized iron, 26 gauge.

INSULATION: Roof—glass wool, U. S. Gypsum Co.

WINDOWS: Sash and screens—Truscon Steel Co. Glass—double strength, quality A, Libbey-Owens-Ford Glass Co.

FLOOR COVERINGS: Kitchen—linoleum, Congoleum-Nairn, Inc.

WOODWORK: Doors—M. & M. Woodworking Co. and E. K. Wood Co. Garage doors—asbestos Flexboard, Johns-Manville.

HARDWARE: By Schlage Lock Co. and Hall Mfg. Co.

PAINTS: By National Lead Co., Arizona Paints & Chemicals, Ltd., J. M. Schofield Co., West Coast Kalsomine Co. and S. C. Johnson & Son.

ELECTRICAL INSTALLATION: Wiring system—rigid conduit. Switches—tumbler, Bryant Electric Co.

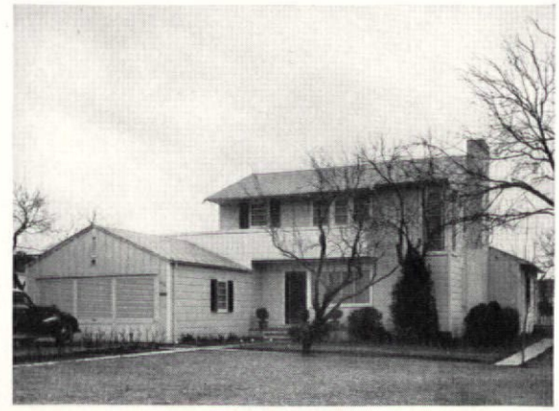
KITCHEN EQUIPMENT: Range—Geo. D. Roper Corp. Refrigerator—Frigidaire Corp. Cabinets—Douglas fir plywood. Counter tops—linoleum, Armstrong Cork Co.

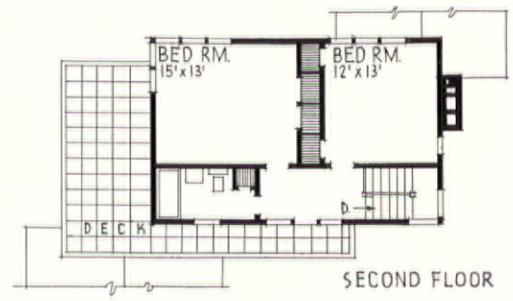
BATHROOM EQUIPMENT: By Kohler Co. Cabinets—Hallenscheid & McDonald.

PLUMBING: Soil pipes—cast iron. Hot and cold water pipes—galvanized steel.

HEATING: Thermostatically controlled gas-fired forced hot air furnace, Race Air Conditioning Co. Grilles—Waterloo Register Co. Water heater—gas fired, Bastian-Morley.

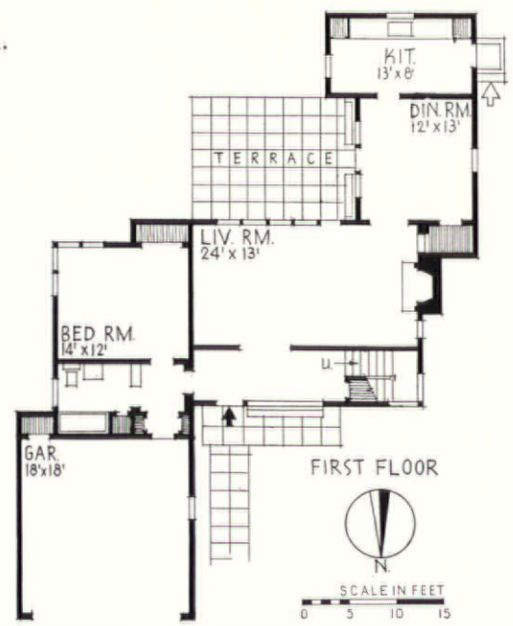
THREE BEDROOMS, ONE DOWNSTAIRS; LIVING ROOMS AT BACK, FRONT GARAGE



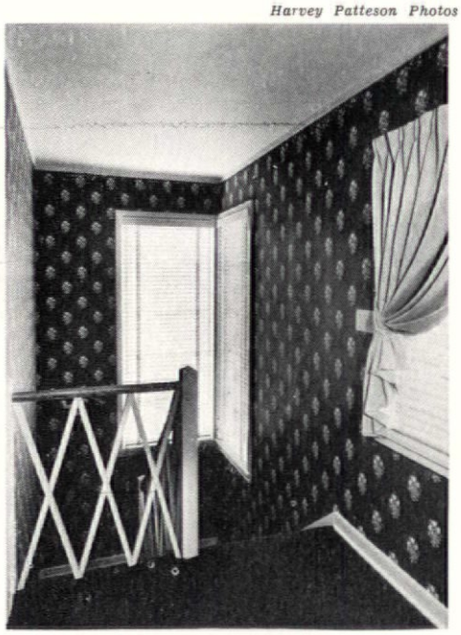


SAN ANTONIO, TEX. BENJAMIN KENNETH WYATT, ARCHITECT, A.I.A.

Turning the house around to face the garden frequently puts the kitchen at the front, cutting off one of the most-used rooms from the most attractive view. In this house, the pitfall is avoided by placing *all* of the rooms at the back—in the front of an L surrounding the terrace. One of the bedrooms is on the ground floor, and, with its bathroom, strategically located to serve as a coat room during parties and eliminate the need for a downstairs lavatory and powder room. The roomy deck at the front of the house on the second floor is provided with a solid railing for privacy. Cost: $7,500. Cubage: 19,500.



Harvey Patteson Photos



CONSTRUCTION OUTLINE

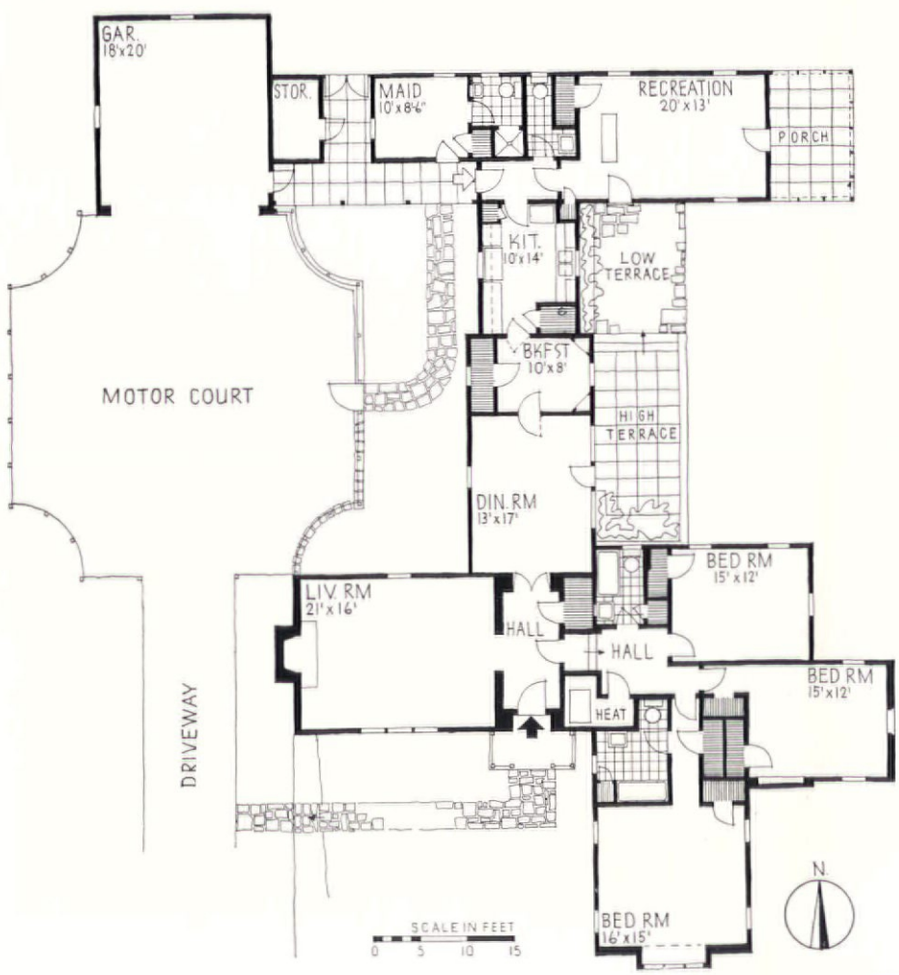
STRUCTURE: Exterior walls—wood frame, canvas and paper for interior finish. Floor construction—wood joist, oak finish.
ROOF: Composition shingles. Deck—Traffic Top, Celotex Corp.
INSULATION: Roof—rockwool, Johns-Manville.
WINDOWS: Sash—double hung, wood. Glass—quality B, Pittsburgh Plate Glass Co.
FLOOR COVERINGS: Main Rooms—oak. Kitchen and bathrooms—linoleum, Congoleum-Nairn, Inc.
HARDWARE: By Sargent & Co.
PAINTS: Floor finish—E. L. Bruce Co.; remainder—Lowe Bros.
ELECTRICAL INSTALLATION: Wiring system—Romex, General Cable Corp. Switches—toggle.
BATHROOM EQUIPMENT: By American Radiator—Standard Sanitary Corp.
PLUMBING: Soil pipes—cast iron. Hot and cold water pipes—galvanized iron.
HEATING: Gas outlets. Water heater—Dictator, American Radiator-Standard Sanitary Corp.

THREE BEDROOMS, TWO BATHS, SERVANT'S ROOM, DINING & BREAKFAST ROOMS

Harvey Patteson

SAN ANTONIO, TEX. BENJAMIN KENNETH WYATT, ARCHITECT, A.I.A.

Larger than it appears from the street, this house has an extended plan ideally suited to a climate where through ventilation is at a premium. All rooms have two exposures; practically all of them have opposite sidewalls exposed. Also a product of climate is the circulation scheme which depends on outdoor access to the garage and recreation room to relieve the breakfast room and kitchen from excessive traffic. The treatment of the exterior is restrained and highly successful, particularly in the use of contrasting tones for walls and trim. Cost: $10,500. Cubage: 32,000.



CONSTRUCTION OUTLINE

STRUCTURE: Exterior walls—brick veneer, wood studs, sheathing; inside—U. S. Gypsum Co.'s Sheetrock and Textone.

ROOF: Covered with composition roofing.

INSULATION: Attic floor—4 in. Rockwool, Johns-Manville.

WINDOWS: Sash—double hung. Glass—quality B, Pittsburgh Plate Glass Co.

FLOOR COVERINGS: Main rooms—oak. Kitchen and bathrooms—linoleum, Congoleum-Nairn, Inc.

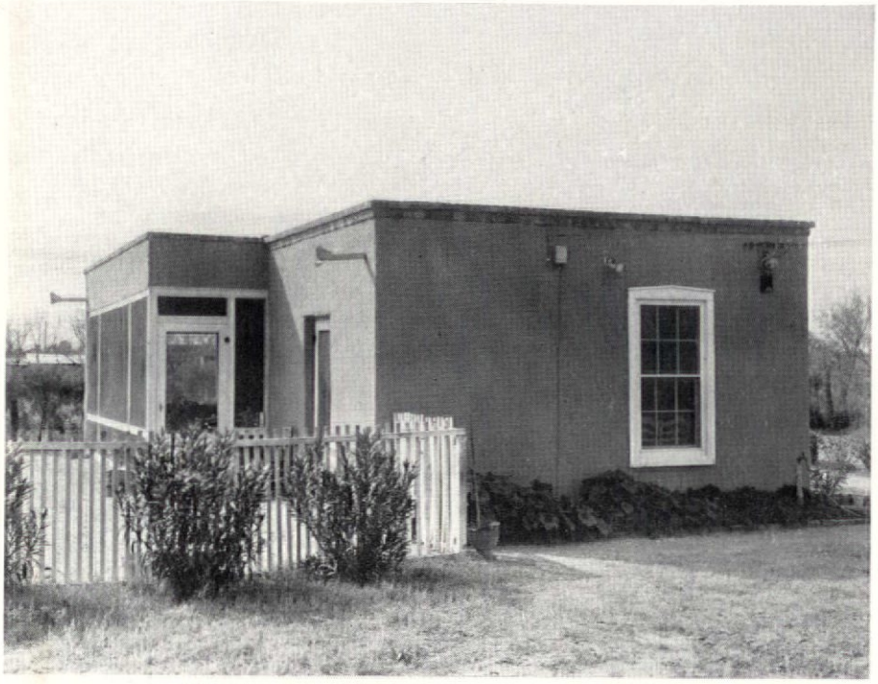
WALL COVERINGS: Sheetrock and wood throughout, U. S. Gypsum Co.

PAINTS: Textone, U. S. Gypsum Co.

BATHROOM EQUIPMENT: By American Radiator-Standard Sanitary Corp.

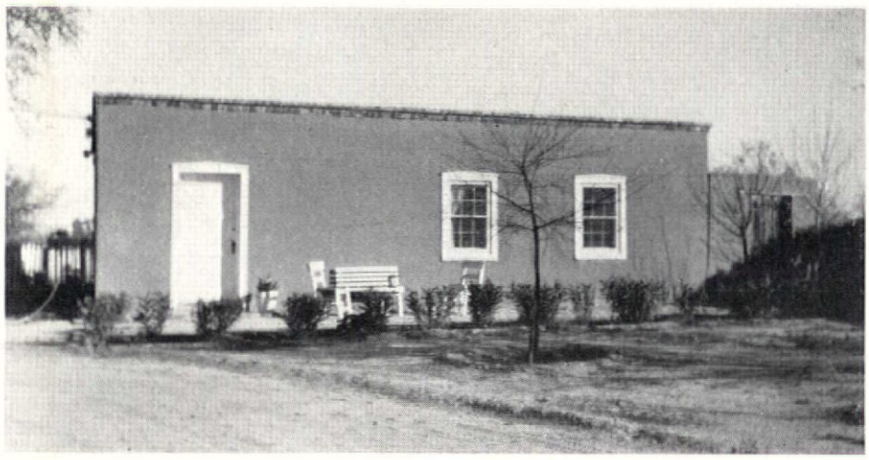
HEATING: Warm air system, filtering and humidifying. Boiler—Pacific Steel Boiler Co. Grilles—Tuttle & Bailey, Inc. Thermostat—Minneapolis-Honeywell Regulator Co. Water heater—Dictator, American Radiator-Standard Sanitary Corp.

SLEEPING PORCH, BATH, LIVING-DINING ROOM, NO BASEMENT, ADOBE WALLS



TUCSON, ARIZ. FREDERICK A. EASTMAN, ARCHITECT

A "traditional" house that is really in the tradition of the Southwest, this ultra-compact scheme packs a great deal of livability within an extremely small space. An all-purpose living room, furnished for dining and study, is the only wholly enclosed space besides the bath and kitchenette; in place of bedrooms, a large porch is used for sleeping, screened in summer and glazed in winter. The bathroom, which is fitted with closets, is used for dressing. Cost: $2,000. Cubage: 8,170.

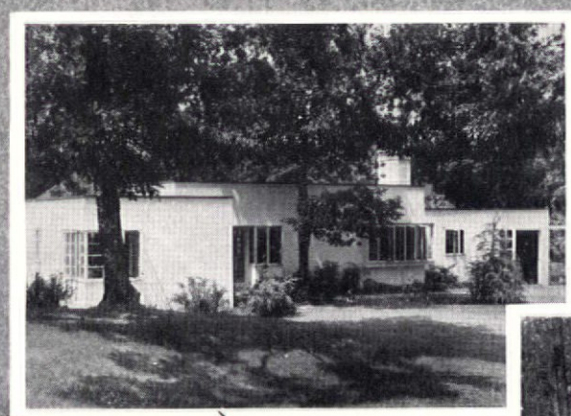


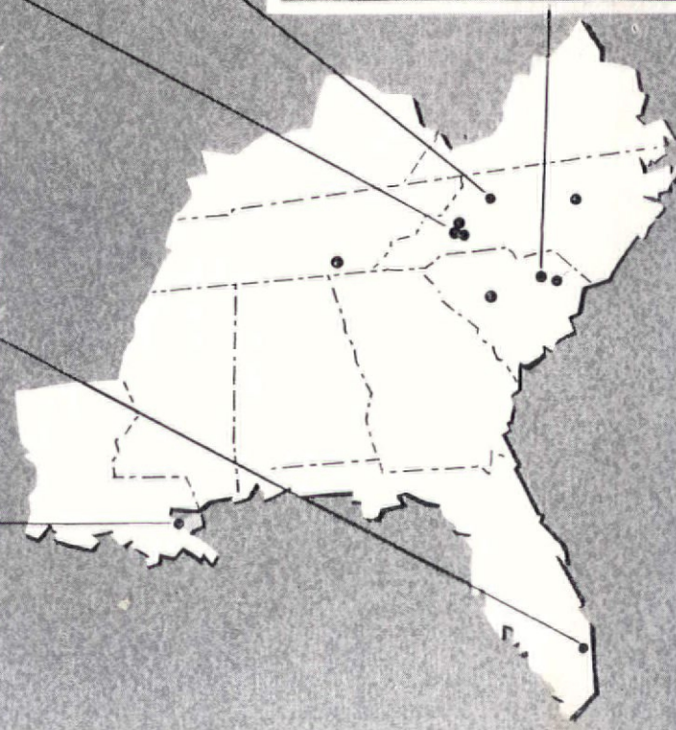
CONSTRUCTION OUTLINE

STRUCTURE: Exterior walls—adobe brick, Bitudobe plaster for exterior and interior. Interior partitions—studs, U. S. Gypsum Co. rigid insulation. Floor construction—concrete slab on gravel fill.
ROOF: Covered with 3-ply asbestos White Top, Johns-Manville.
FIREPLACE: Dampers—Superior Fireplace Co.
SHEET METAL WORK: Flashing and leaders—galvanized iron.
INSULATION: Roof—U. S. Gypsum Co. insulation.
WINDOWS: Sash—pine, double hung. Glass—Pennvernon, single strength, quality B, Pittsburgh Plate Glass Co.
WOODWORK: Douglas fir throughout.
PAINTS: By Benjamin Moore & Co.
ELECTRICAL INSTALLATION: Wiring system—BX. Switches—Bryant Electric Co.
KITCHEN EQUIPMENT: Refrigerator—Norge Co.
BATHROOM EQUIPMENT: By Crane Co. Seat—C. F. Church Mfg. Co.
PLUMBING: Soil pipes—cast iron. Hot and cold water pipes—galvanized steel. Pump-Westco Pump Co.

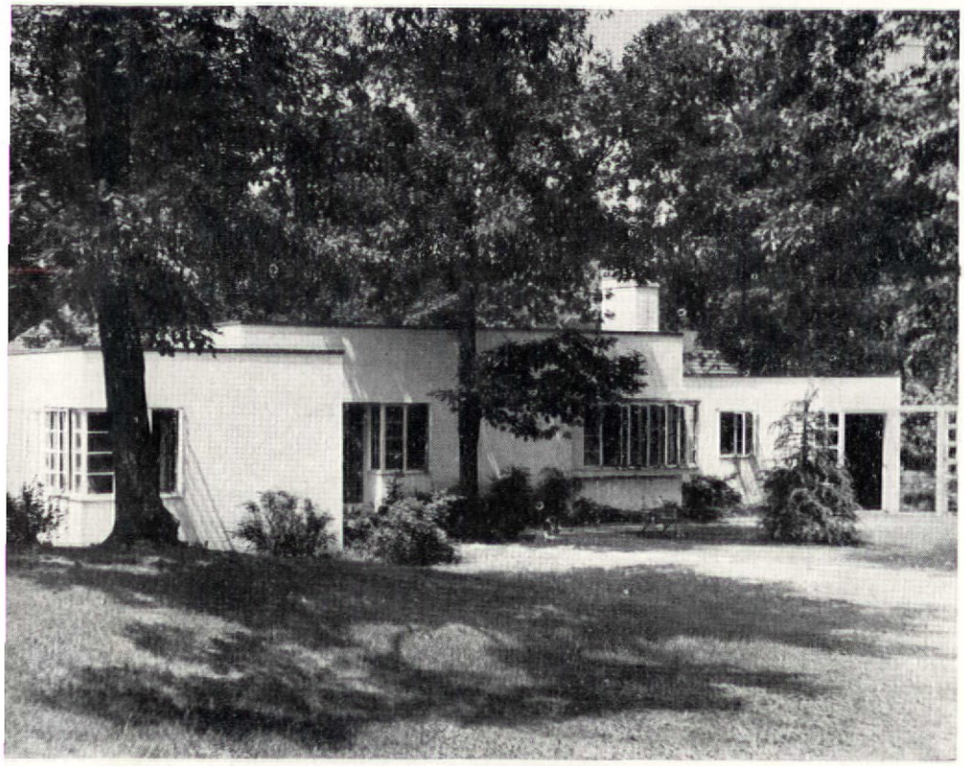
SOUTH

Although this region has produced a distinct house type in the past, present design activity consists chiefly of recapitulation, and adaptation of early New England types. Modern houses are almost non-existent except in Florida resort centers. The climate is hot, and for the most part extremely humid. Winters are mild. Shelter from the sun has always been part of the design problem, and is reflected in the porches and porticoes of the traditional houses. Materials most abundantly available are wood and brick; labor costs are less. Apart from the small savings in materials, there is no need for the tightly planned two-story boxes characteristic of the northern regions, and the low rambling house might easily become the dominant residential form.



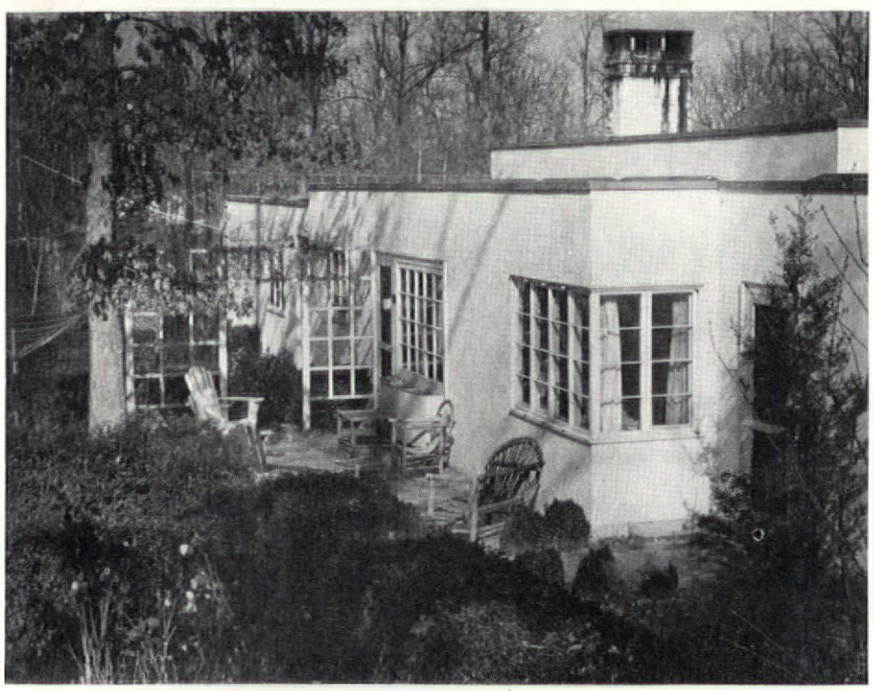


THREE BEDROOMS, ONE BATH, SERVANT'S ROOM AND BATH, NO BASEMENT



WINSTON-SALEM, N. C.
VOORHEES & EVERHART
ARCHITECTS, A.I.A.

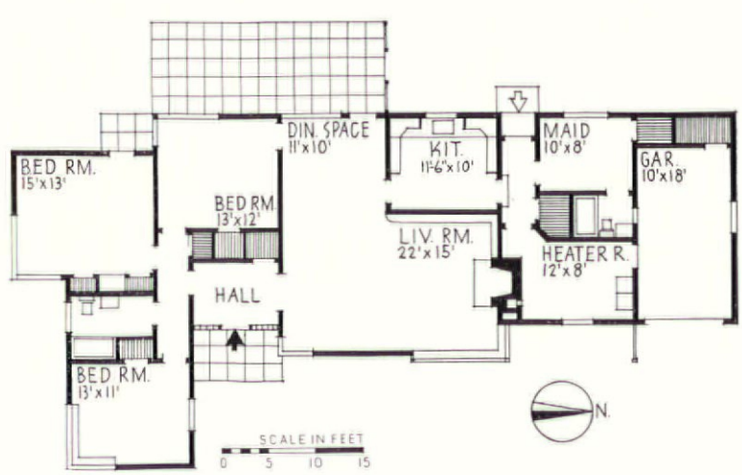
A well-studied plan, with the problem of adequate ventilation solved by the generous use of windows and proper placing of rooms. The service section is organized as a unit, the kitchen, heater room and maid's room being directly accessible from the rear hall; the heater room is located to permit use of a single chimney. A rear terrace, illustrated below, serves as a useful extension of the living and dining space. The exterior gains interest from the variation in height between the living and sleeping areas, and its light color is most effective against the wooded background. Cost: $8,430. Cubage: 23,182.



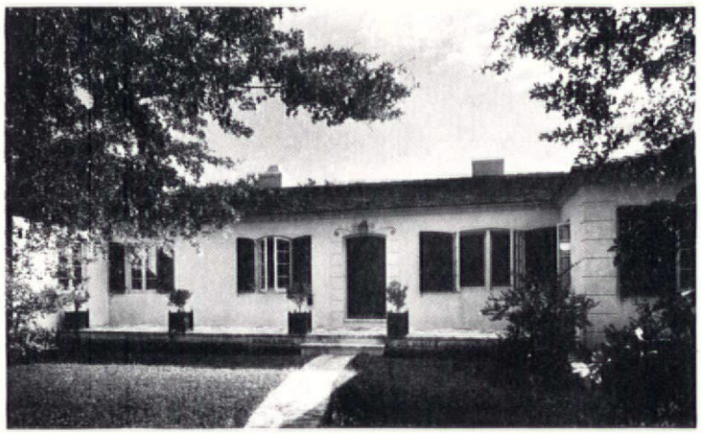
CONSTRUCTION OUTLINE

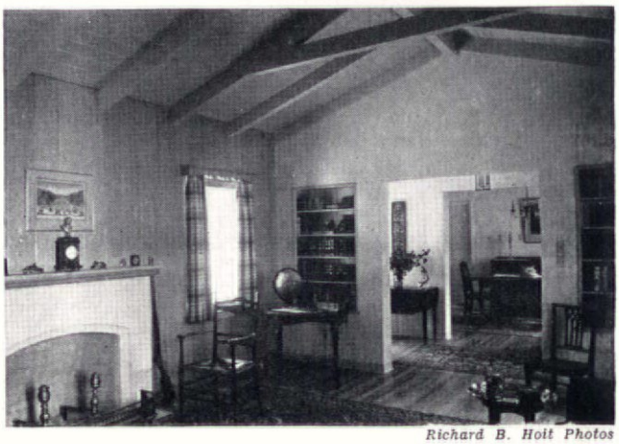
STRUCTURE: Exterior walls—stucco over fir studs, Gimco rockwool, General Insulating & Mfg. Co., Ecod Fabric metal lath, Reynolds Metal Corp., smooth finish plaster.
ROOF: Covered with built-up tar and gravel, Cox Roofing Co.
SHEET METAL WORK: Flashing and copings—Lyonore galvanized metal, Lyon Conklin & Co., Inc. Leaders and ducts—galvanized steel, American Rolling Mill Co.
WINDOWS: Sash—casements, Andersen Corp. Glass—single and double strength, qualities A and B. Glass blocks—Owens-Illinois Glass Co.
FLOOR COVERINGS: Living room and bedrooms—oak. Kitchen and bathrooms—sheet rubber, Goodyear Tire & Rubber Co.
HARDWARE: By P. & F. Corbin.
PAINTS: By Sherwin-Williams Co., Medusa Portland Cement Co. and Minwax Co.
ELECTRICAL INSTALLATION: Wiring system—non-metallic cable. Switches—Bryant Electric Co. Fixtures—Lightolier Co.
BATHROOM EQUIPMENT: By American Radiator-Standard Sanitary Corp. Cabinets—The F. H. Lawson Co.
HEATING: Forced warm air, filtering, humidifying, Herman Nelson Corp. Thermostat—Minneapolis-Honeywell Regulator Co.

LIVING ROOM



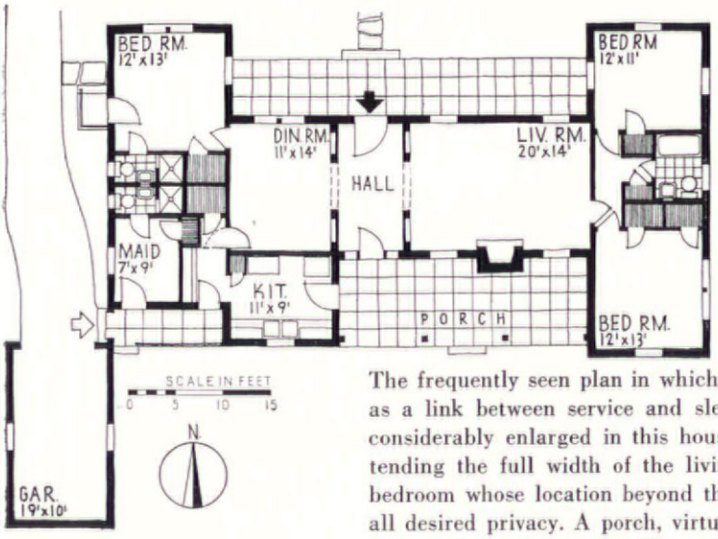
THREE BEDROOMS, SERVANT'S ROOM, THREE BATHS, SEPARATE DINING ROOM





Richard B. Holt Photos

CORAL GABLES, FLA. HOWARD B. KNIGHT, ARCHITECT



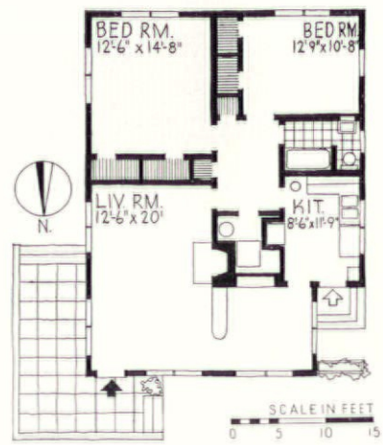
The frequently seen plan in which the living room serves as a link between service and sleeping rooms has been considerably enlarged in this house. There is a hall extending the full width of the living room, and a study-bedroom whose location beyond the dining room assures all desired privacy. A porch, virtually a necessity in this climate, faces the garden. There is some discrepancy in character between the front of the house, a rather stiff derivation of French Provincial, and the agreeably informal rear. Cost: $9,000. Cubage: 23,600.

CONSTRUCTION OUTLINE

STRUCTURE: Exterior walls—8 in. concrete block, exterior stucco; inside—furring strips, U. S. Gypsum Co. rocklath and plaster.
ROOF: Covered with tile, Giffen Roofing Co.
SHEET METAL WORK: Flashing—copper and Toncan metal, Republic Steel Corp.
WEATHERSTRIPPING: Chamberlin Metal Weatherstrip Co.
WINDOWS: Sash—cypress casement, A. H. Ramsey. Glass—double strength, quality A, Libbey-Owens-Ford Glass Co.
FLOOR COVERINGS: Main rooms—red oak, Linardy Flooring Co. Kitchen—linoleum, Armstrong Cork Co. Bathrooms—tile, Miami Tile & Marble Co. and Mosaic Tile Co.
HARDWARE: By Russell & Erwin Mfg. Co. and Frantz Mfg. Co.
PAINTS: By Sec Mfg. Co., Sherwin-Williams Co. and Linardy Flooring Co.
ELECTRICAL INSTALLATION: Wiring system—steel tube. Switches—Hart & Hegeman. Fixtures—Lightmakers, Inc.
KITCHEN EQUIPMENT: Range—Hot Point, Edison-General Electric Appliances, Inc. Refrigerator—General Electric Co. Cabinets—Florida Maid Kitchen Cabinets.
BATHROOM EQUIPMENT: By Kohler Co.
PLUMBING: Hot and cold water pipes—galvanized steel.
WATER HEATER—Solar Water Heater Co.

TWO BEDROOMS, ONE BATH, LIVING-DINING ROOM, NO BASEMENT

ROCKY MOUNT, N. C.
F. CARTER WILLIAMS
ARCHITECT

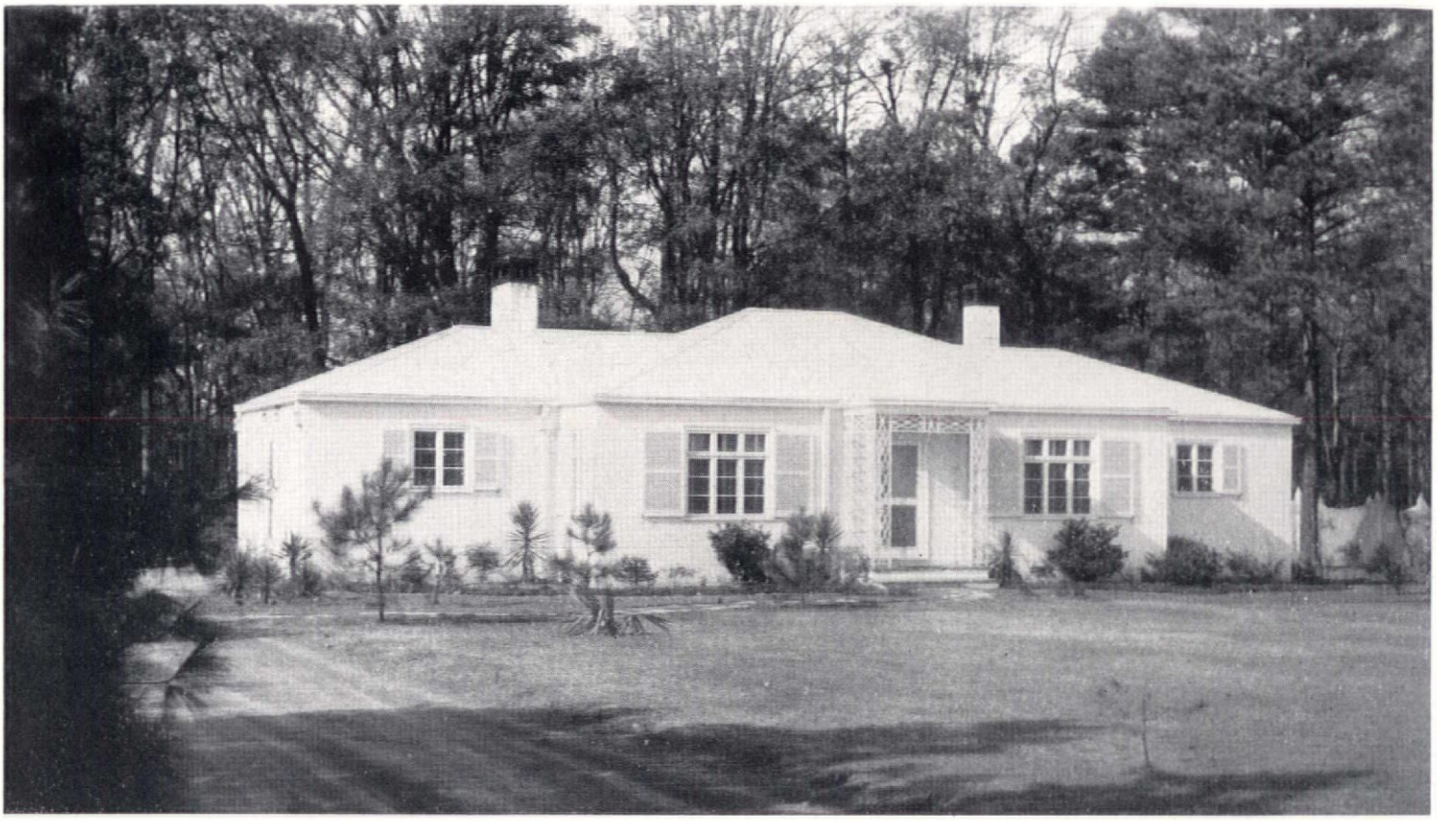


The house above shows an unusually successful variant of the familiar two-bedroom square plan. An extension at the front permits the addition of a dining room and increases living room space. Features worth noting are the location of the heating, the closets, placing of the kitchen, and the excellent circulation. Cost: $4500. Cubage: 16,000. The example below shows a plan well suited to a corner lot. Corridor and hall space is reduced to a minimum. Cost: $5,385. Cubage: 23,000.

. . . SEPARATE DINING ROOM, ATTACHED GARAGE

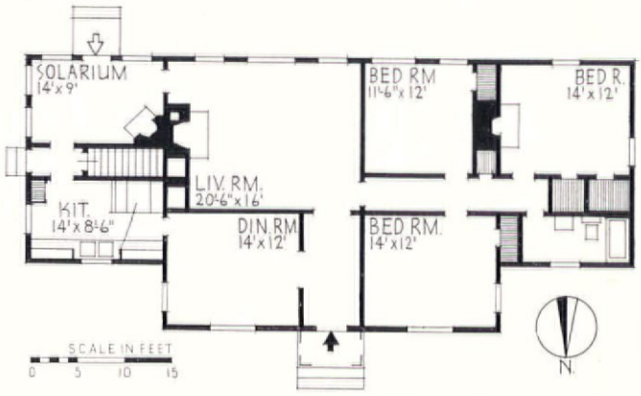
ASHEVILLE, N. C.
HENRY IRVEN GAINES
ARCHITECT, A.I.A.

THREE BEDROOMS, ONE BATH, SEPARATE DINING ROOM, SOLARIUM, BASEMENT



DARLINGTON, S. C. G. THOMAS HARMON, 3RD, ARCHITECT, A.I.A.

The suggestion of southern character displayed here is the result of making everything white; in other respects the house is no different from types found in other parts of the country. Considerations of symmetry are emphasized in the plan, with a bedroom balancing the dining room, chimneys equally distant from the central axis, etc. A useful adjunct to semi-outdoor living is the solarium off the living room; both are at the back of the house overlooking the rear garden. Cost: $7,500. Cubage: 24,288.



HOUSE IN ROCKY MOUNT, N. C.

FOUNDATION: Walls—4 in. brick curtain.
STRUCTURE: Exterior walls—beveled siding, N. C. pine, waterproof paper, sheathing, studs; inside—gypsum lath and plaster. Floor construction—sub-floor, building paper, oak.
ROOF: Asbestos shingles, Ruberoid Co.
SHEET METAL WORK: Flashing—16 oz. copper. Gutters and leaders—galvanized iron.
INSULATION: Attic floor—rockwool.
WINDOWS: Defiance Perfect Glide Window units, Building Supplies Corp. Glass—double strength, quality B.
ATTIC STAIR: Bessler Disappearing Stairway Co.
FLOOR COVERINGS: Main rooms—select red oak. Kitchen—linoleum, Armstrong Cork Co. Bathrooms—ceramic tile.
HARDWARE: By Sargent & Co.
KITCHEN EQUIPMENT: Range — Magic Chef, American Stove Co. Refrigerator—Frigidaire Corp.
BATHROOM EQUIPMENT: All fixtures by American Radiator-Standard Sanitary Corp. Cabinets—Hess Warming & Ventilating Co.
PLUMBING: Soil pipes—cast iron. Hot and cold water pipes—copper tubing.
HEATING: Forced warm air system, winter conditioning, Lennox Furnace Co., Inc. Regulators—Minneapolis-Honeywell Regulator Co. Water heater—Motor Wheel Corp.

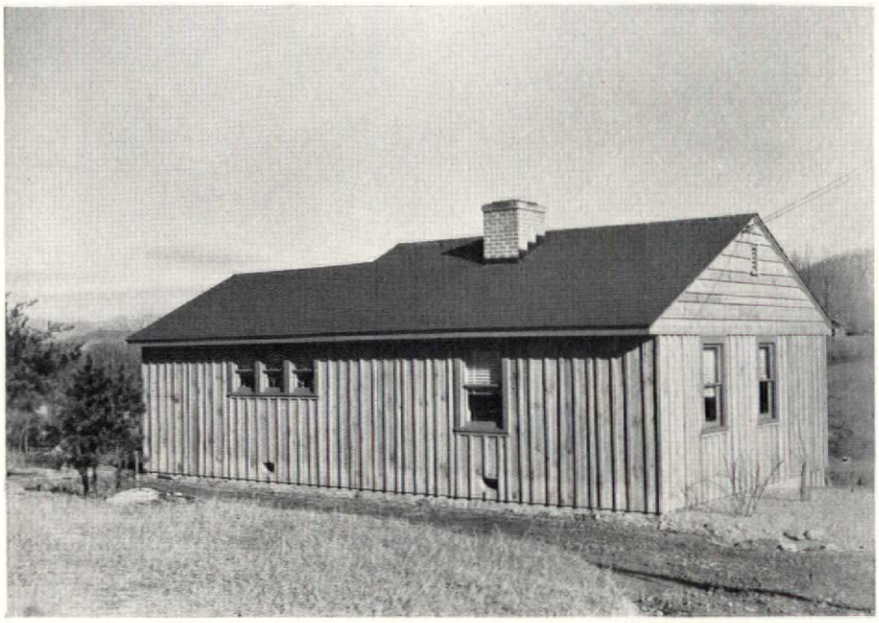
HOUSE IN ASHEVILLE, N. C.

STRUCTURE: Exterior walls—brick, 1 in. air space, building felt, sheathing; inside—studs, lath and plaster.
ROOF: Asphalt shingles, Bird & Son.
FIREPLACE: Damper—H. W. Covert Co.
INSULATION: Roof—glasswool, U. S. Gypsum Co.
WINDOWS: Double hung wood, Morgan Mfg. Co. Glass—single strength, quality A.
FLOOR COVERINGS: Main rooms—select red oak, Carolina Oak Flooring Co. Kitchen—linoleum, Armstrong Cork Co. Bathrooms—tile, Robertson Art Tile Co.
WOODWORK: Morgan Mfg. Co. Garage doors—overhead, Kinnear Mfg. Co.
HARDWARE: By Sargent & Co.
PAINTS: By Benjamin Moore & Co., Pratt & Lambert, and Reardon Co.
ELECTRICAL INSTALLATION: Wiring system—flexible conduit. Switches—Bakelite Corp. Fixtures—Lightolier Co.
KITCHEN EQUIPMENT: Range and refrigerator—General Electric Co.
BATHROOM EQUIPMENT: By Crane Co. Cabinets—Miami Div., Philip Carey Co.
HEATING: Forced hot water system. Boiler—Crane Co. Radiators—American Radiator-Standard Sanitary Corp. Pump, summer water heater—Bell & Gossett. Thermostat—Minneapolis-Honeywell Regulator Co.

HOUSE IN DARLINGTON, S. C.

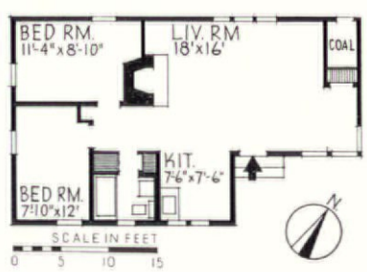
STRUCTURE: Exterior walls—studs, wood sheathing, 1 in. stucco applied on Johns-Manville Steeltex; inside—U. S. Gypsum Co. rock-lath and plaster.
ROOF: Asbestos shingles, Johns-Manville.
FIREPLACE: Dampers—Majestic Co.
WINDOWS: Sash—Silentite casement, Curtis Cos. Glass—single strength, quality B, Pennvernon, Pittsburgh Plate Glass Co. Weatherstripping—Monarch Metal Weatherstrip Co.
FLOOR COVERINGS: Main rooms—red oak, Atlanta Oak Flooring Co. Kitchen and bathrooms—linoleum, Armstrong Cork Co.
WALL COVERINGS: Kitchen and bathrooms-Presdwood, Masonite Corp.
HARDWARE: By Russell & Erwin Mfg. Co.
ELECTRICAL INSTALLATION: Wiring system—Lumflex cable. Switches—General Electric Co. Fixtures—Lightolier Co.
KITCHEN EQUIPMENT: Range and refrigerator—General Electric Co.
BATHROOM EQUIPMENT: Toilet—W. A. Case & Son Mfg. Co. Remainder—American Radiator-Standard Sanitary Corp. Cabinets—Miami Cabinet Div., Philip Carey Co.
HEATING: Warm air system, Aire-Flo oil furnace, Lennox Furnace Co. Thermostat—Minneapolis-Honeywell Regulator Co. Water heater—General Electric Co.

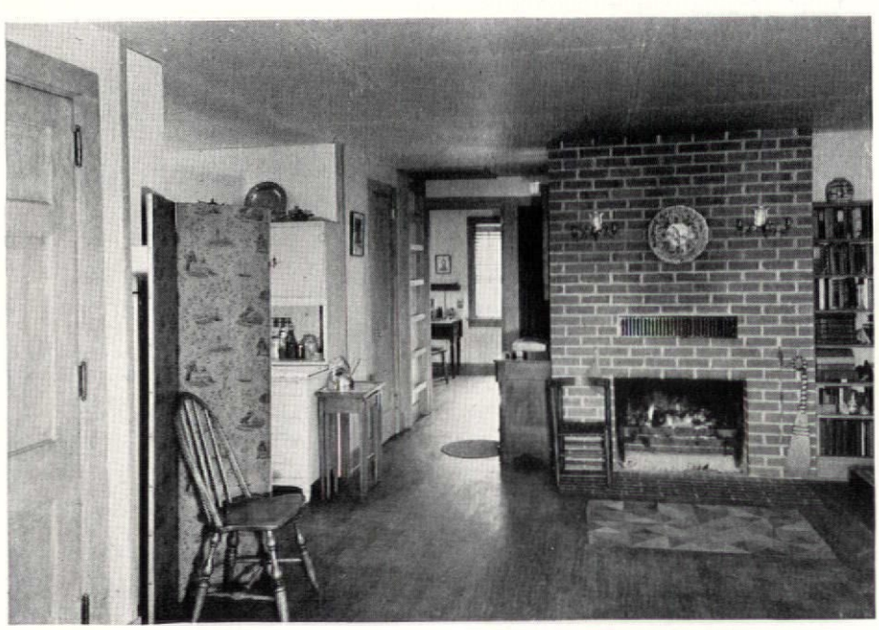
TWO BEDROOMS, ONE BATH, LIVING-DINING ROOM, NO BASEMENT



ASHEVILLE, N. C.
ANTHONY LORD
ARCHITECT, A.I.A.

This example represents a serious effort to arrive at a minimum house. Materials and fittings, such as the two-light double-hung windows, are of the simplest. An interior partition was saved by making the kitchen an alcove off the living room. A coal burning fireplace of the circulating warm air type provides the heat. Access to storage space in the attic is provided by a built-in ladder, visible in the interior view below. Cost: $2,500. Cubage: 10,013.

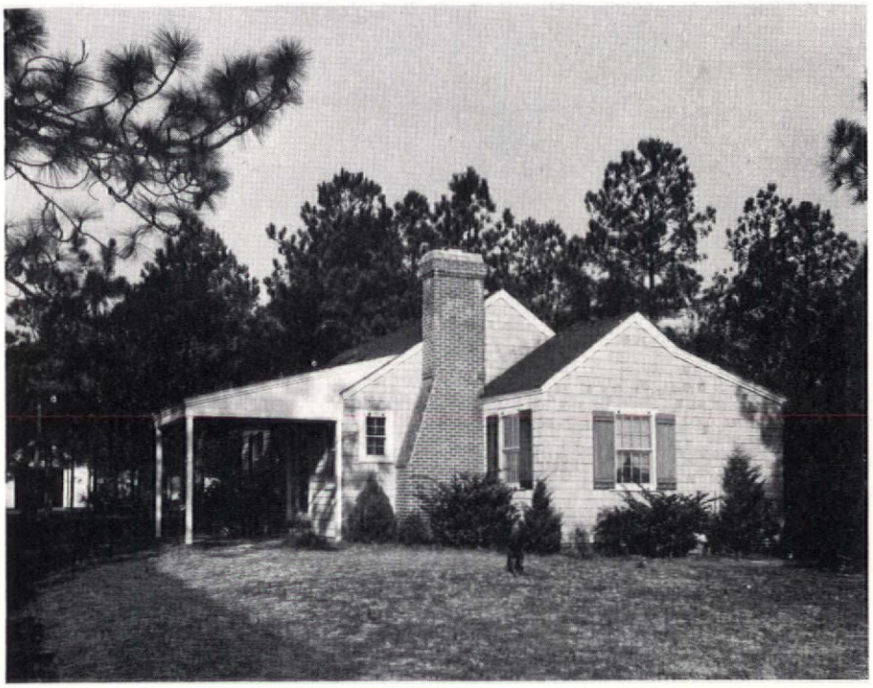




CONSTRUCTION OUTLINE

FOUNDATION: Poured concrete.
STRUCTURE: Exterior walls—white pine sheathing, waterproof paper, diagonal sheathing, studs, National Gypsum Co. plaster board. Floor construction — yellow pine joists, sub-floor, paper, oak finish. Ceilings —gypsum board, U. S. Gypsum Co.
ROOF: Covered with shingles, Bird & Sons.
FIREPLACE: Damper—Superior Fireplace Co.
SHEET METAL WORK: Flashing, gutters and leaders—26 gauge galvanized iron.
WINDOWS: Sash—Pease Woodwork Co. Glass—single strength, quality B.
FLOOR COVERINGS: Red oak throughout, Sells Mfg. Co.
WOODWORK: Yellow pine, Pease Woodwork Co.
HARDWARE: By Sargent & Co.
PAINTS: By Samuel Cabot, Inc. and Minwax Co.
ELECTRICAL INSTALLATION: Wiring system—armored cable. Switches—Square D. Co.
KITCHEN EQUIPMENT: Range—gas. Refrigerator — Servel, Inc. Cabinets — Pease Woodwork Co.
BATHROOM EQUIPMENT: By American Radiator-Standard Sanitary Corp.
PLUMBING: Soil pipes—cast iron. Vent, and water pipes—galvanized iron.

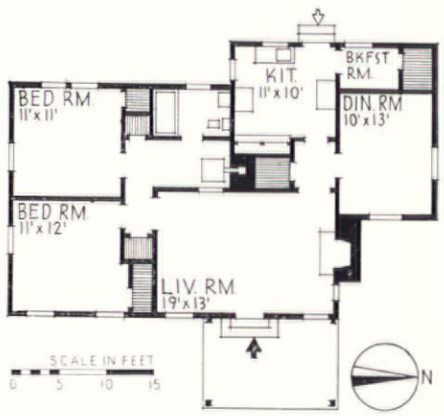
TWO BEDROOMS, ONE BATH, SEPARATE DINING ROOM, NO BASEMENT



COLUMBIA, S. C.
LAFAYE, LAFAYE & FAIR
ARCHITECTS, A.I.A.

A conventional small house design. The end faces the street so that the narrow lot is used to best adavantage. As in many southern houses, there is no entrance hall or vestibule, the front door opening directly into the living room. There is no basement, due to bad under-ground water conditions, and storage and heater space is provided on the first floor. Cost: $3,500, excluding architect's fee. Cubage: 17,494.

Charles Old

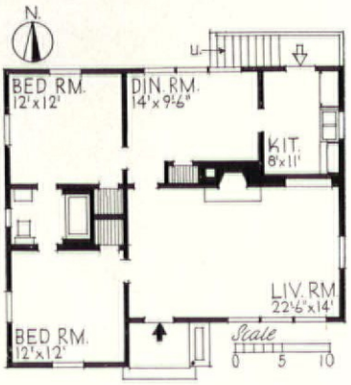


CONSTRUCTION OUTLINE

FOUNDATION: Brick walls on concrete footings.
STRUCTURE: Exterior walls—red cedar shingles, waterproof building paper, T. & G. sheathing; inside—studs and U. S. Gypsum Co. rocklath and plaster. Floor construction—sub-floor, building paper and E. L. Bruce Co. wide oak finish.
ROOF: Covered with asphalt shingles.
SHEET METAL WORK: Flashing—galvanized iron.
WINDOWS: Sash—double hung. Glass—double strength, quality B, Libbey-Owens-Ford Glass Co.
FLOOR COVERINGS: Main rooms—oak, E. L. Bruce Co. Bathrooms—ceramic tile.
WALL COVERINGS: Main rooms — wallpaper. Kitchen and bathrooms—paint.
WOODWORK: N. C. yellow pine throughout.
HARDWARE: By P. & F. Corbin.
PAINTS: By Pittsburgh Plate Glass Co., Jorden-Wolfe Paint Co. and S. C. Johnson Co.
ELECTRICAL INSTALLATION: Wiring system — Wire-Flex, The Wiremold Co. Switches—toggle, General Electric Co. Fixtures—Lightolier Co.
KITCHEN EQUIPMENT: Range — Magic Chef, American Stove Co. Refrigerator—General Electric Co. Cabinets—Cunningham Lumber Co.
BATHROOM EQUIPMENT: By American Radiator-Standard Sanitary Corp.
PLUMBING: Soil pipes—cast iron. Hot and cold water pipes—galvanized iron.
HEATING: Heatrola fuel oil circulating heater, Estate Stove Co.

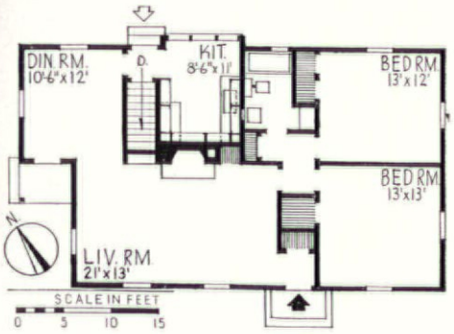
TWO BEDROOMS, ONE BATH, SEPARATE DINING ROOM, BASEMENT

HARTSVILLE, S. C.
G. THOMAS HARMON, 3RD
ARCHITECT, A.I.A.



A compact, economical plan whose simple rectangular shape is broken only by the projecting bedroom and sheltered entry. The exterior treatment is interesting in comparison with the example below, where the dark walls and white trim are most effective in giving the design scale and interest. Cost: $4,400. Cubage: 16,380. An additional element in cost reduction is to be seen in the plan below, where all plumbing lines are concentrated in one place. Cost: $4,300. Cubage: 19,800.

ASHEVILLE, N. C. ANTHONY LORD, ARCHITECT, A.I.A.

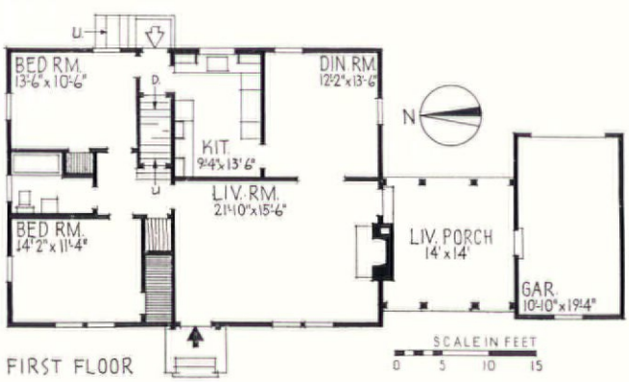


TWO BEDROOMS, ONE BATH, UNFINISHED SECOND FLOOR, ATTACHED GARAGE

A. Charles Hinkle

LOOKOUT MOUNTAIN, GA. W. H. SEARS & P. B. SHEPHERD, ARCHITECTS, A. I. A.

Space for four bedrooms is provided in this house, the rooms on the second floor being left unfinished until needed. The garage, linked to the living room by a porch, shows an inexpensive way of increasing the apparent size and horizontal character of the house. As in many of the preceding examples in this section, there is little here to indicate any specific regional trend in design. Cost: $5,178. Cubage: 34,480.



HOUSE IN HARTSVILLE, S. C.

STRUCTURE: Exterior walls — asbestos shingles, Johns-Manville, building paper, wood sheathing; inside—studs and U. S. Gypsum rocklath and plaster.
ROOF: Asphalt shingles, Johns-Manville.
WINDOWS: Sash—double hung, Morgan Sash & Door Co. Glass—single strength, quality B, Pennvernon, Pittsburgh Plate Glass Co. Weatherstripping—Monarch Metal Weatherstrip Co.
FLOOR COVERINGS: Main rooms—red oak, Atlanta Oak Flooring Co. Kitchen and bathrooms—linoleum, Congoleum-Nairn, Inc.
WALL COVERINGS: Kitchen and bathrooms —tempered Presdwood, Masonite Corp.
KITCHEN EQUIPMENT: Range — General Electric Co. Refrigerator—Kelvinator Corp.
BATHROOM EQUIPMENT: Toilet—W. A. Case & Son.
Remainder of fixtures by American Radiator-Standard Sanitary Corp. Cabinets—Miami Cabinet Div., Philip Carey Co.
PLUMBING: Hot and cold water pipes—copper tubing.
HEATING: Warm air circulating heater, Estate Stove Co. Water heater—General Electric Co.

HOUSE IN ASHEVILLE, N. C.

STRUCTURE: Exterior walls—white pine siding, paper, sheathing and studs; inside—lath and plaster, National Gypsum Co. Floor construction—sub-floor, red oak finish.
ROOF: Slate coated shingle, Bird & Son.
SHEET METAL WORK: Flashing, gutters and leaders—galvanized iron.
WINDOWS: Sash—Pease Woodwork Co. Glass—single strength, quality B.
ATTIC STAIR: Disappearing, Pease Woodwork Co.
FLOOR COVERINGS: Main rooms—select oak, Beaman Mfg. Co. Kitchen—linoleum, Armstrong Cork Co. Bathrooms—rubber tile, Paul Costé.
WOODWORK: Southern yellow pine, Pease Woodwork Co.
HARDWARE: By P. & F. Corbin.
PAINTS: By Benjamin Moore & Co., Pratt & Lambert and Samuel Cabot, Inc.
BATHROOM EQUIPMENT: Fixtures by Crane Co.
PLUMBING: Soil pipes—cast and galvanized iron. Water pipes—galvanized iron.
HEATING: Warm air system, Williamson Heater Co.

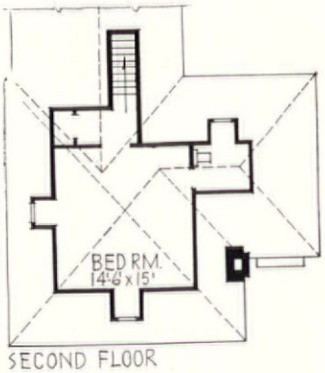
ON LOOKOUT MOUNTAIN, TENN.

STRUCTURE: Exterior walls—studs, sheathing, building paper and 10 in. beveled pine siding. Interior partitions—studs and plaster on wood lath.
ROOF: Covered with asphalt shingles, The Philip Carey Co.
SHEET METAL WORK: Flashing, gutters and downspouts—ingot galvanized iron.
WINDOWS: Sash—double hung. Glass—single strength, quality B, Libbey-Owens-Ford Glass Co.
FLOOR COVERINGS: All floors—oak.
WALL COVERINGS: Sand finished gypsum plaster throughout. Bathrooms—Keene's cement.
WOODWORK: Trim and doors—pine. Garage doors—Overhead Door Corp.
HARDWARE: Solid bronze, P. & F. Corbin.
KITCHEN EQUIPMENT: Range and refrigerator—electric, General Electric Co.
BATHROOM EQUIPMENT: Fixtures by American Radiator-Standard Sanitary Corp.
PLUMBING: Waste pipes—cast iron. Water pipes—steel.
HEATING: Forced hot air system. Water heater—electric, General Electric Co.

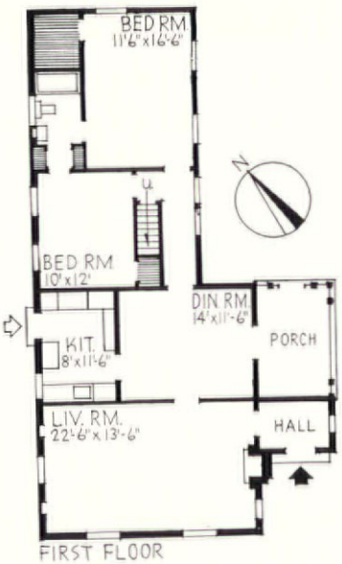
THREE BEDROOMS, SEPARATE DINING ROOM, NO BASEMENT

NEW ORLEANS, LA. F. MONROE LABOUISSE, ARCHITECT, A.I.A.

An adaptation, in the local tradition, of the eighteenth century French style, this house provides two ground floor bedrooms with connecting bath, and a third bedroom with its own lavatory under the roof. Designed for a narrow lot, the living room, dining room, and kitchen are in a compact square at the front, the bedrooms in a wing at the rear. Connection with the garden is provided by a porch at the side, screened from the street by the entrance vestibule. Cost: $6,500. Cubage: 18,000.



SECOND FLOOR



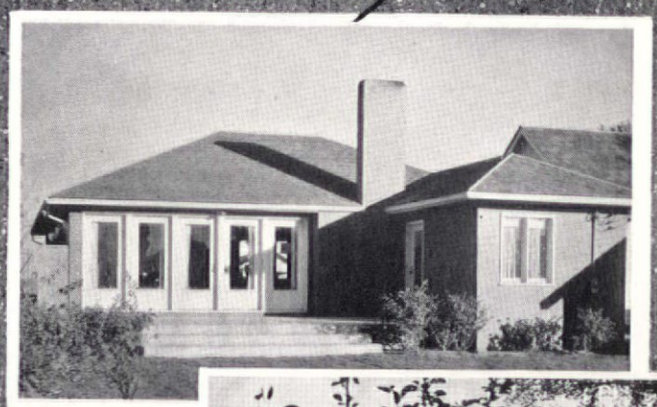
FIRST FLOOR

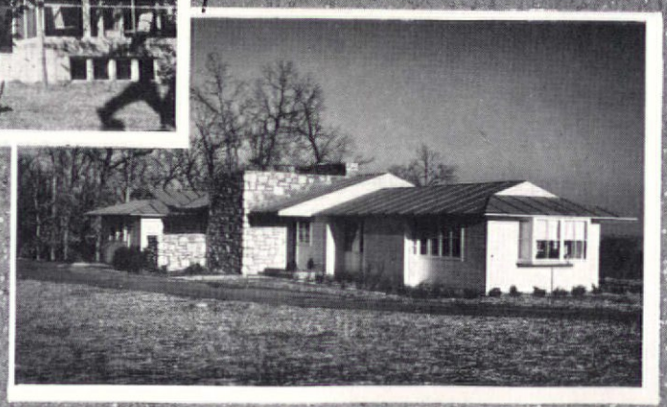
CONSTRUCTION OUTLINE

STRUCTURE: Exterior walls—Portland cement stucco on Johns-Manville Steel-Tex, Celotex Corp. Vapor-Seal and plaster. Floor construction—(1st.) reenforced concrete slab, walnut blocks in mastic; (2nd.) joists and pine flooring.
SHEET METAL WORK: Armco galvanized iron, American Rolling Mill Co.
INSULATION: Attic floor and roof—rockwool, Eagle-Picher Lead Co.
WINDOWS: Sash—double hung, wood. Glass—Libbey-Owens-Ford Glass Co.
FLOOR COVERINGS: Kitchen—asphalt tile, Armstrong Cork Co. Bathrooms— ceramic tile.
ELECTRICAL INSTALLATION: Wiring system—BX. Switches—tumbler.
KITCHEN EQUIPMENT: Range—Tappan Stove Co. Refrigerator—General Electric Co.
BATHROOM EQUIPMENT: By Crane Co.
PLUMBING: Soil pipes—cast iron. Hot and cold water pipes—copper.
HEATING: Oil-fired warm air system, Quaker Mfg. Co. Water heater—Crane Co.

MIDDLE WEST

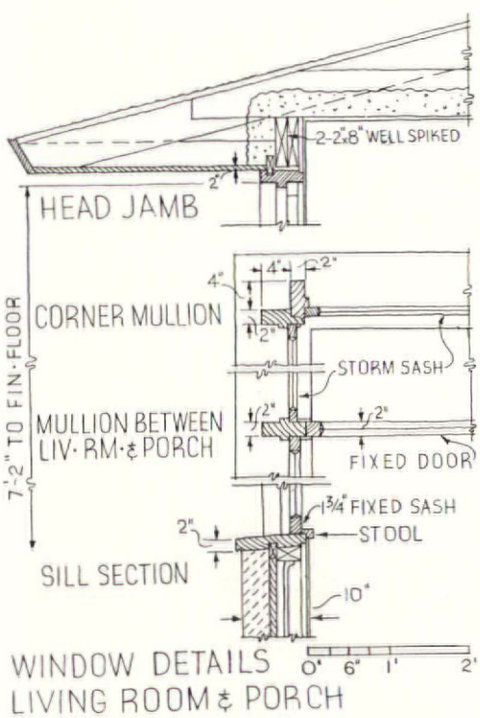
A continental climate, with extremes of temperature through the year; the hottest and coldest temperatures in the U. S. have been recorded in the Dakotas. The terrain is flat or rolling. The area is so enormous that local materials vary considerably: lumber is most abundant in some sections, clay products and stone in others. Present-day trends toward regional expression all stem directly from Frank Lloyd Wright's early prairie houses; Wright's influence has always been strongest in this part of the country. Salient characteristics of the best new work are the strongly emphasized horizontals, the heavily overhanging low-pitched roofs, a fondness for bulky and sometimes cumbersome masonry forms, and a sparing use of glass in large areas.



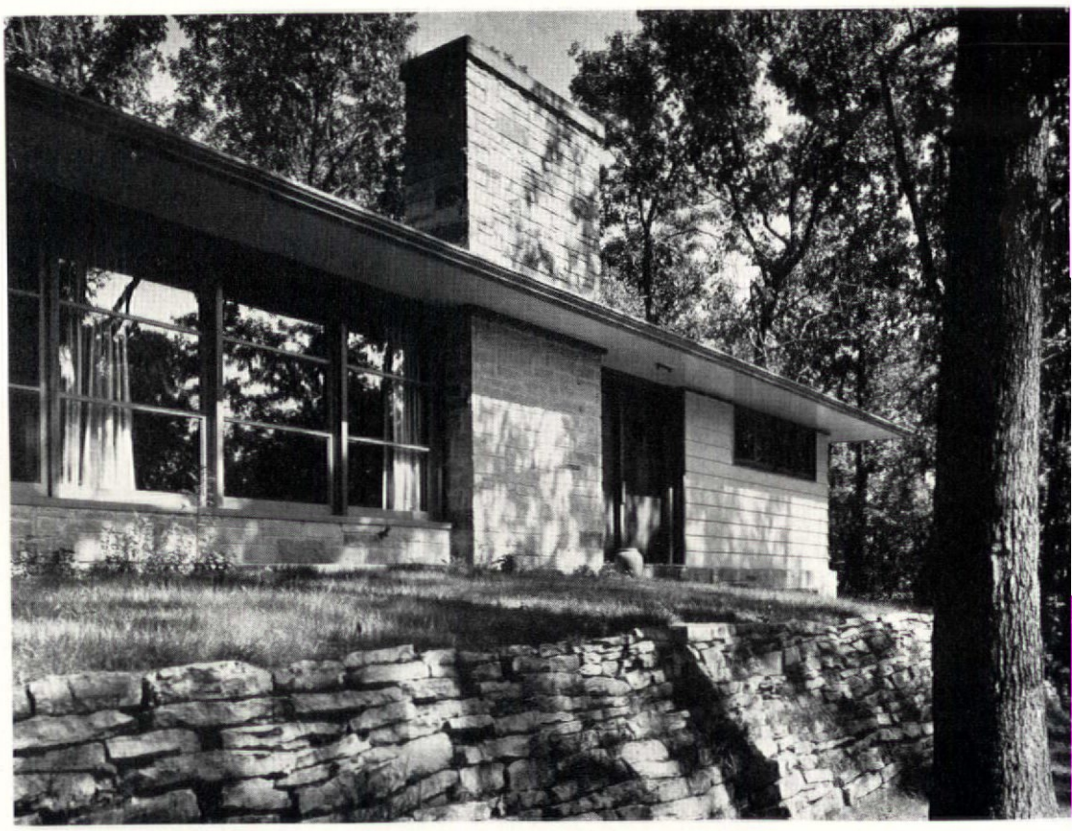


TWO BEDROOMS, BATH, GLASS-ENCLOSED PORCH, BASEMENT GARAGE

Hedrich-Blessing Photos

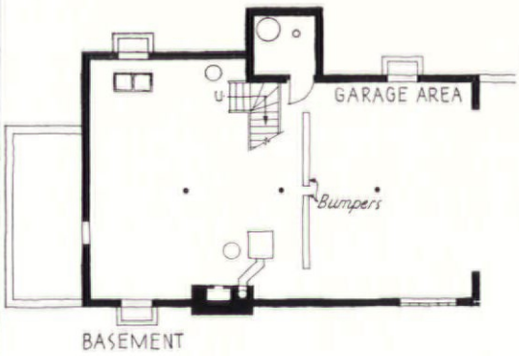


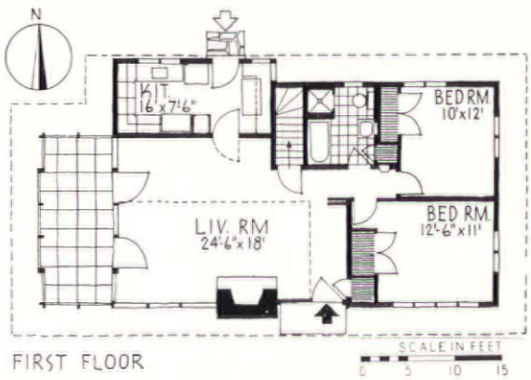
WINDOW DETAILS
LIVING ROOM & PORCH



HINSDALE, ILL. WILSON CONNELL, JR., ARCHITECT. LAWRENCE H. HAASE, DESIGNER

An irregular site made it possible to put the garage under the house with only a small amount of excavation required. A stair down from the living room gives direct access to the garage. The plan is arranged so that either kitchen or living room may be used for meals; elimination of a separate dining room has resulted in an unusually generous living room. In its exterior treatment the house follows an increasingly popular trend whose characteristic features are seen in the varied fenestration and in the strongly horizontal roof line. Cost: $8,700. Cubage: 22,337.





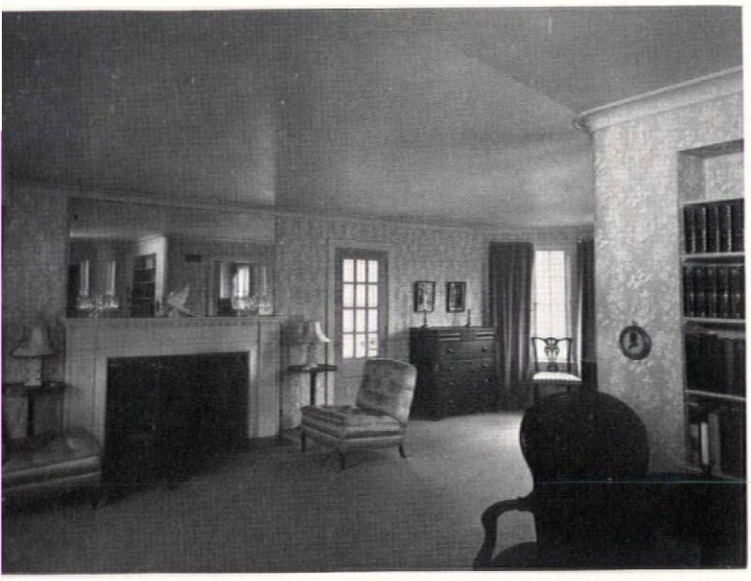
CONSTRUCTION OUTLINE

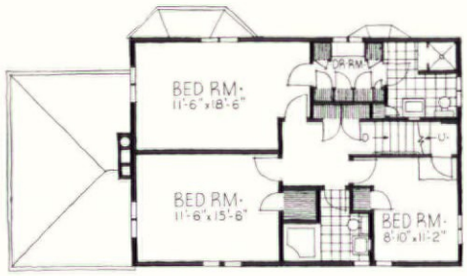
STRUCTURE: Exterior walls — redwood siding, Sisalkraft Co. paper, pine sheathing, rockwool; interior finish—plywood.
ROOF: Covered with asphalt shingles.
FIREPLACE: Heatilator Corp.
SHEET METAL WORK: Flashing—16 oz. copper.
INSULATION: Outside walls and roof—rockwool.
WINDOWS: Sash—casement, wood. Glass—double strength, quality A, Libbey-Owens-Ford Glass Co. Glass blocks—Owens-Illinois Glass Co.
WALL COVERINGS: Plywood and Weldbord throughout, U. S. Plywood Corp.
HARDWARE: P. & F. Corbin. Garage doors: McKee Overhead Door Co.
ELECTRICAL INSTALLATION: Wiring system—galvanized conduit. Switches—Harvey Hubbell, Inc.
BATHROOM EQUIPMENT: By American Radiator-Standard Sanitary Corp. Cabinets—Fiat Metal Mfg. Co.
HEATING: Warm air furnace—Herman Nelson Corp.

TWO BEDROOMS, TWO BATHS, LAVATORY, DEN, ATTACHED GARAGE, BASEMENT

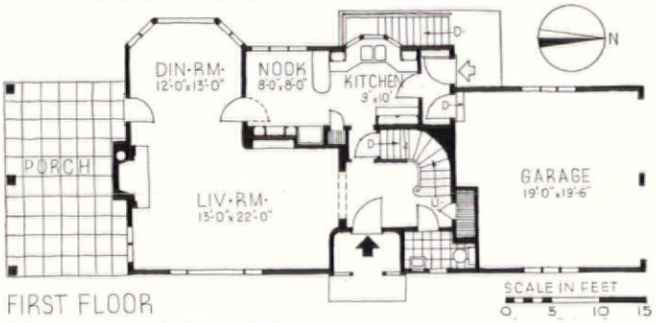
A modified period design in which an attached garage and porch have been effectively used to modify the usual boxlike mass. The plan shows a good arrangement of the required elements, a successful combination of spaciousness and efficiency. The dressing room contains all the closets that would otherwise be in the master bedroom, also serving as a sound baffle between the latter and bath. On the first floor the screened porch is conveniently placed for outdoor dining. Cost: $12,000. Cubage: 34,000.

DUNDEE, ILL. ELMER GYLLECK, ARCHITECT, A.I.A.





SECOND FLOOR



FIRST FLOOR

CONSTRUCTION OUTLINE

STRUCTURE: Exterior walls (1st.)—flush Western pine board siding laid horizontally and vertically, Douglas fir sheathing, studs, Sisalkraft Co. paper; (2nd.)—stucco over metal lath; inside U. S. Gypsum Co. rocklath and plaster. Floor construction—pine subfloor, red oak finish.

ROOF: Covered with red cedar shingles.

SHEET METAL WORK: Toncan metal throughout, Republic Steel Corp.

INSULATION: Outside walls and attic floor—Red Top wool, U. S. Gypsum Co.

WINDOWS: Sash—wood. Glass—double strength, Libbey-Owens-Ford Glass Co.

FLOOR COVERINGS: Kitchen and bathrooms—linoleum, Armstrong Cork Co.

WOODWORK: Trim and doors—pine. Cabinets—metal and poplar. Garage doors—Barber-Colman Co.

HARDWARE: By Sargent & Co.

PAINTS: By Pratt & Lambert and Samuel Cabot, Inc.

ELECTRICAL INSTALLATION: Wiring system—rigid conduit in basement; remainder—BX.

KITCHEN EQUIPMENT: Range—Standard Gas Equipment Corp. Refrigerator—Frigidaire Corp. Cabinets—Dieterich Steel Cabinet Corp.

BATHROOM EQUIPMENT: By Crane Co. Shower—Fiat Metal Mfg. Co.

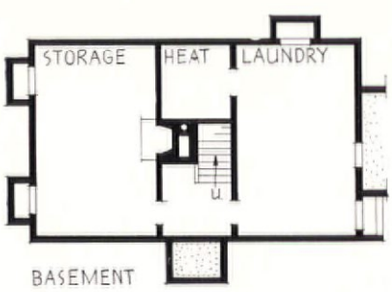
PLUMBING: Hot and cold water pipes—galvanized iron.

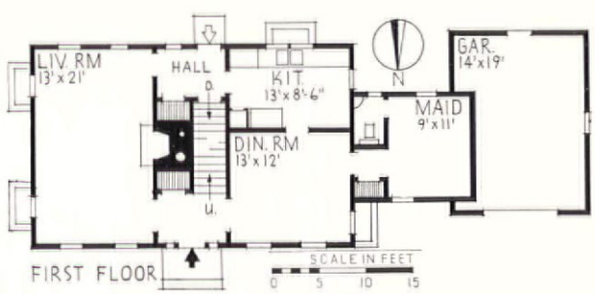
HEATING: Gas-fired warm air system, filtering and humidifying, Bryant Heater Co. Thermostat—Minneapolis-Honeywell Regulator Co. Water heater—Crane Co.

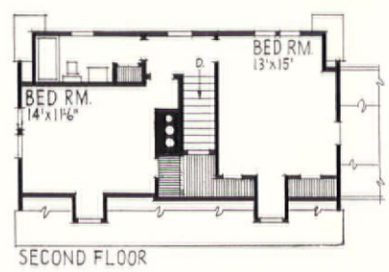
THREE BEDROOMS, BATH, LAVATORY, FULL BASEMENT, ATTACHED GARAGE

A conventional period house, with the familiar central stair plan varied by the use of a bedroom as the link between house and garage. One of the difficulties presented by the attempt to combine modern plan requirements with a predetermined Colonial front elevation is illustrated by the two exterior photographs. Cost: $11,000. Cubage: 24,000.

DES MOINES, IOWA JOHN NORMILE, ARCHITECT, A.I.A.







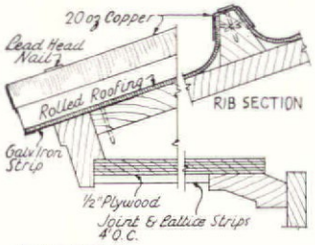
Stanley Photos

CONSTRUCTION OUTLINE

FOUNDATION: Concrete block.
STRUCTURE: Exterior walls—cedar siding, Celotex Corp. sheathing, studs; inside—plaster on Celotex Corp. lath. Floor construction—sub-floor, red oak finish.
ROOF: Covered with shingles.
SHEET METAL WORK: Flashing, gutters, leaders—galvanized iron.
INSULATION: Outside walls—Celotex Corp. sheathing. Roof—rockwool.
WINDOWS: Sash—double hung, white pine. Glass—double strength, quality A.
STAIR: Treads—oak. Risers and stringers—birch.
FLOOR COVERINGS: Living room—carpet. Bedrooms and halls—oak. Kitchen and bathrooms—linoleum.
WOODWORK: White pine throughout.
ELECTRICAL INSTALLATION: Wiring system—metal conduit and Romex, General Cable Corp. Switches—Harvey Hubbell, Inc.
KITCHEN EQUIPMENT: Range—gas. Refrigerator—electric.
BATHROOM EQUIPMENT: By Crane Co. Cabinets—metal.
PLUMBING: Soil pipes—cast iron. Hot and cold water pipes—copper.
HEATING: Warm air system. Thermostat—Minneapolis-Honeywell Regulator Co. Water heater—Crane Co.

TWO BEDROOMS, TWO MAIDS' ROOMS, STUDY, GARAGE, NO BASEMENT

Tucker & Poindexter



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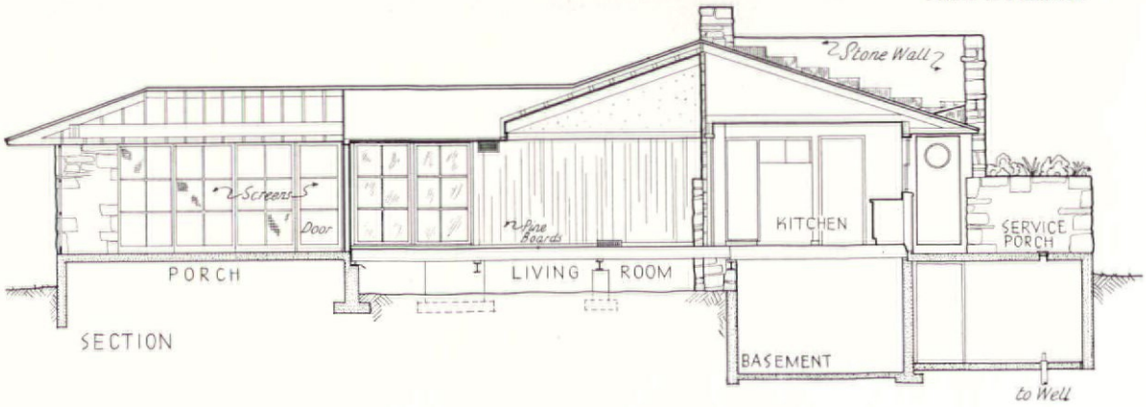
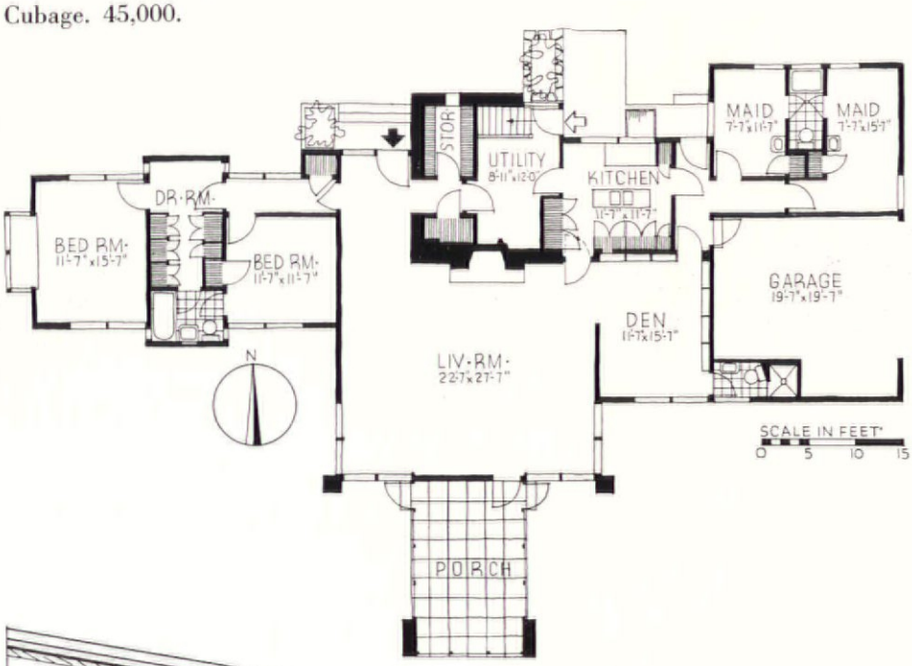
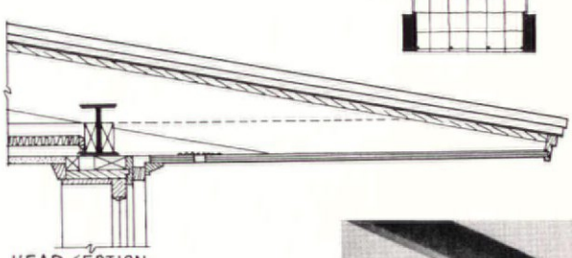


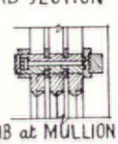
SECTION

The trend toward combined living and dining rooms has come a long way when it is considered preferable, in a house of this size, to replace the dining room with a study. The plan is spread out, but is by no means uneconomical, and it shows a number of features of uncommon interest. The two bedrooms, for instance, flank a bath-dressing room unit lighted by windows in the projecting ends. The study may be treated as part of the living room, or closed off for use as another bedroom. Services are concentrated in a compact group. Cost: $14,000. Cubage. 45,000.

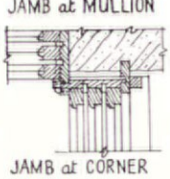




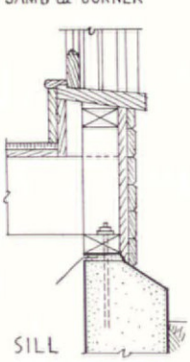
HEAD SECTION



JAMB at MULLION



JAMB at CORNER



SILL

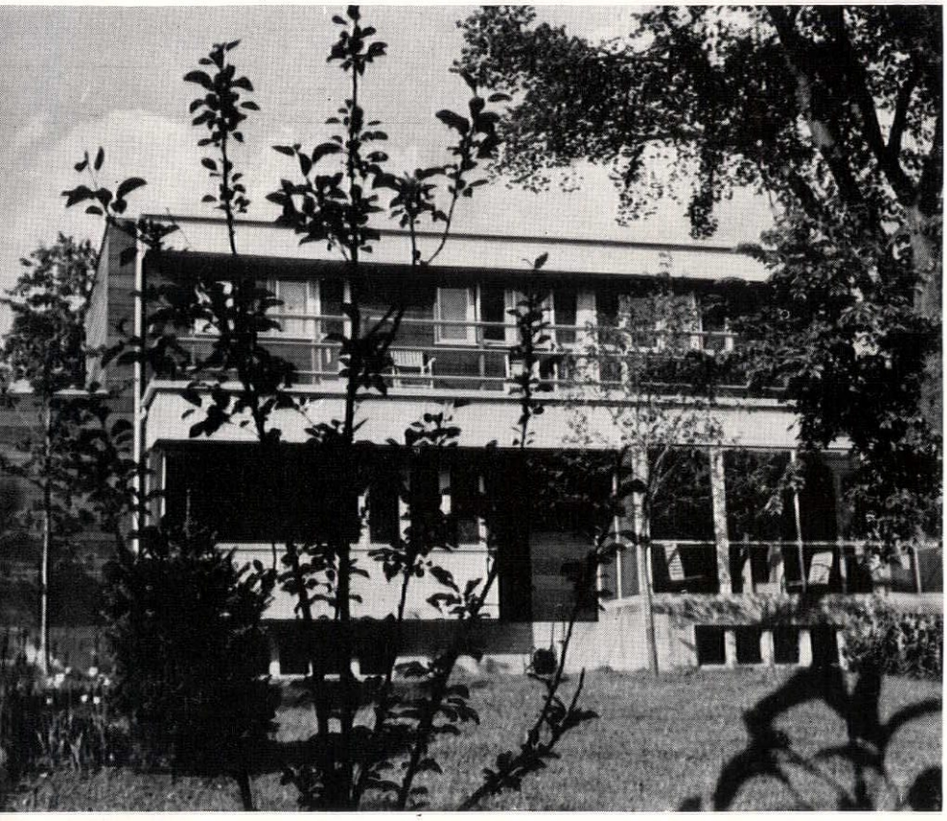
SECTION THRU LIVING ROOM WINDOWS.

Tucker & Poindexter

CONSTRUCTION OUTLINE

STRUCTURE: Exterior walls—shiplap siding, Insulite Co. sheathing, studs; inside—U. S. Gypsum Co. rocklath and plaster or cypress boards. Floor construction—yellow pine sub-floor, oak finish.
ROOF: Covered with 90 lb. slate coated roll roofing, The Philip Carey Co.; copper channel.
FIREPLACE: Damper—Bennett Fireplace Co.
SHEET METAL WORK: Flashing—lead. Gutters and leaders—copper. Ducts—galvanized iron.
INSULATION: Outside walls—Insulite Co. Roof—Ideal Air Cell, Hinde & Douche. Weatherstripping—Monarch Metal Weatherstrip Co.
WINDOWS: Sash — wood. Glass — double strength, quality A, Libbey-Owens-Ford Glass Co.
FLOOR COVERINGS: Main rooms—oak. Kitchen and bathrooms—linoleum.
WALL COVERINGS: Living room—cypress. Bathrooms—linoleum.
WOODWORK: Cypress throughout.
HARDWARE: By Sargent & Co. and Schlage Lock Co.
PAINTS: By Pratt & Lambert, National Lead Co. and Minwax Co.
ELECTRICAL INSTALLATION: Wiring system—BX. Fixtures—Architectural Bronze Co.
KITCHEN EQUIPMENT: Range—Westinghouse Electric & Mfg. Co. Refrigerator—General Electric Co.
BATHROOM EQUIPMENT: By American Radiator-Standard Sanitary Corp. Cabinets—Charles Parker Co.
PLUMBING: Soil pipes—cast iron. Hot and cold water pipes—galvanized steel.
HEATING: Warm air system. Boiler—Bryant Electric Co. Thermostat—Minneapolis-Honeywell Regulator Co.

THREE BEDROOMS, ONE BATH, LAVATORY, STUDY, DINING ROOM, GARAGE

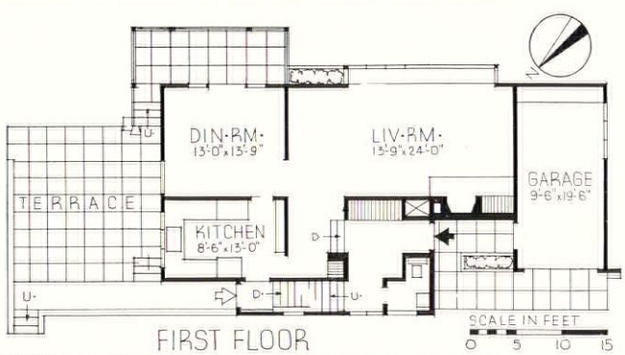


MINNEAPOLIS, MINN.

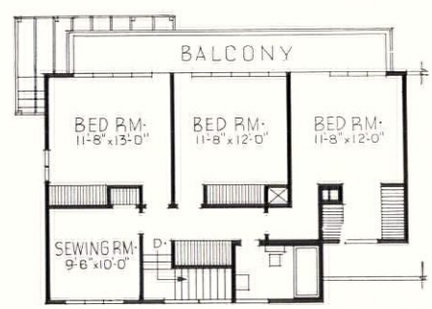
CLOSE & SCHEU, ARCHITECTS, A.I.A.

A straightforward, modern solution, this house makes the most of a wide lot and a southwest garden exposure by placing all of the important rooms at the back, and through the provision of a broad second floor balcony on this side. Kitchen, dining room, and terrace are at the east end; a slight slope toward the back of the plot permits generous windows for the basement game room. Cost: $10,432. Cubage: 27,180.

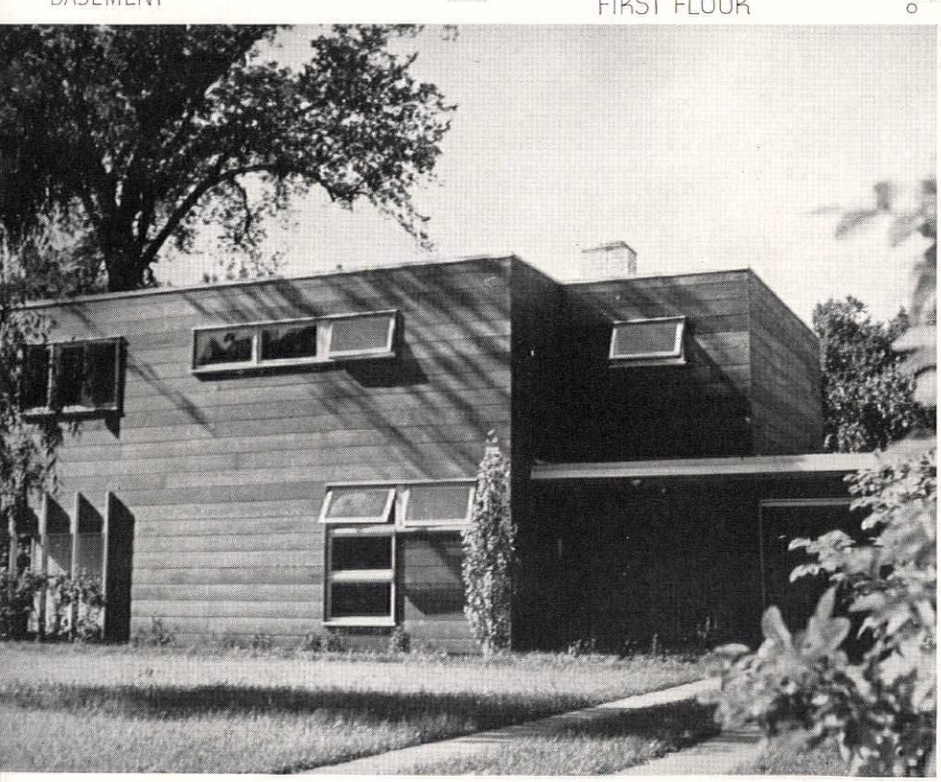
BASEMENT



FIRST FLOOR



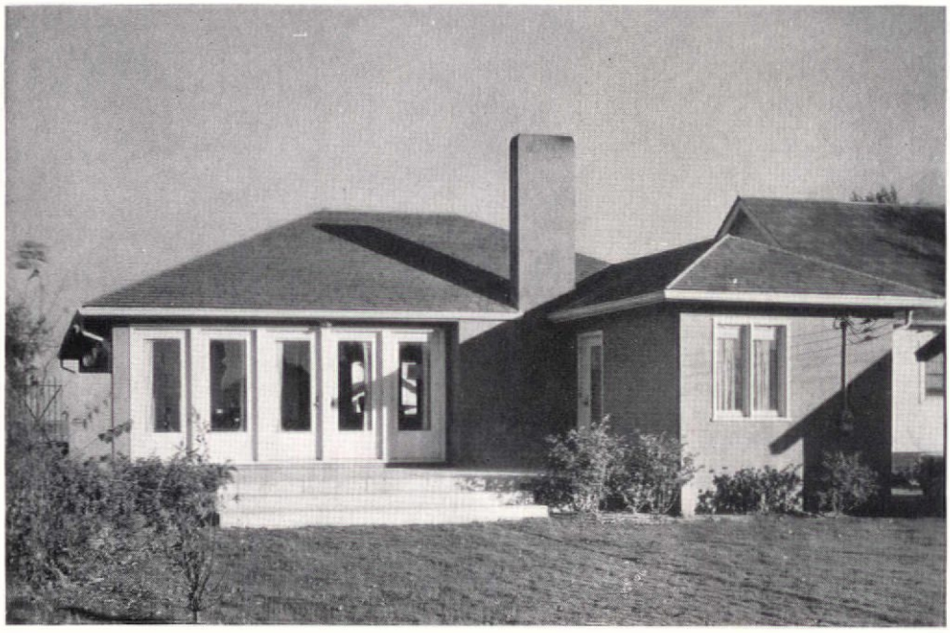
SECOND FLOOR



CONSTRUCTION OUTLINE

STRUCTURE: Exterior walls—redwood siding, Graylite sheathing, Insulite Co., Balsam wool, Wood Conversion Co. Interior—wallboard, Homasote Co.
ROOF: Covered with 5-ply pitch and gravel. Deck—covered with canvas.
FIREPLACE: Damper—H. W. Covert Co.
INSULATION: Outside walls and roof—Balsam wool, Wood Conversion Co. Weatherstripping—Reese Metal Windowstrip Co.
WINDOWS: Sash—pine casements. Glass—double strength, Pittsburgh Plate Glass Co.
FLOOR COVERINGS: Main rooms—oak. Kitchen and bathrooms—linoleum, Armstrong Cork Co.
WALL COVERINGS: Living rooms—Homasote, Homasote Co., Nu-wood, Wood Conversion Co. and gum plywood. Bedrooms and halls—Celotex Corp and Homasote Co. Bathrooms—Linowall, Armstrong Cork Co.
WOODWORK: Trim and cabinets—red gum. Doors—"Sturdibilt," M. & M. Woodworking Co.
HARDWARE: By Schlage Lock Co.
KITCHEN EQUIPMENT: Range—General Electric Co. Refrigerator—Sears-Roebuck.
BATHROOM: By Kohler Co. Cabinets—Charles Parker Co.
PLUMBING: Soil pipes—cast iron. Hot water pipes—copper.
HEATING: General Electric Co. unit, air filters, humidification, automatic controls. Grilles—Tuttle & Bailey, Inc. Regulator—Minneapolis-Honeywell Regulator Co. Water heater—Everhot Heater Co.

TWO BEDROOMS, ONE BATH, BASEMENT PLAYROOM, SERVANT'S ROOM, AND BATH

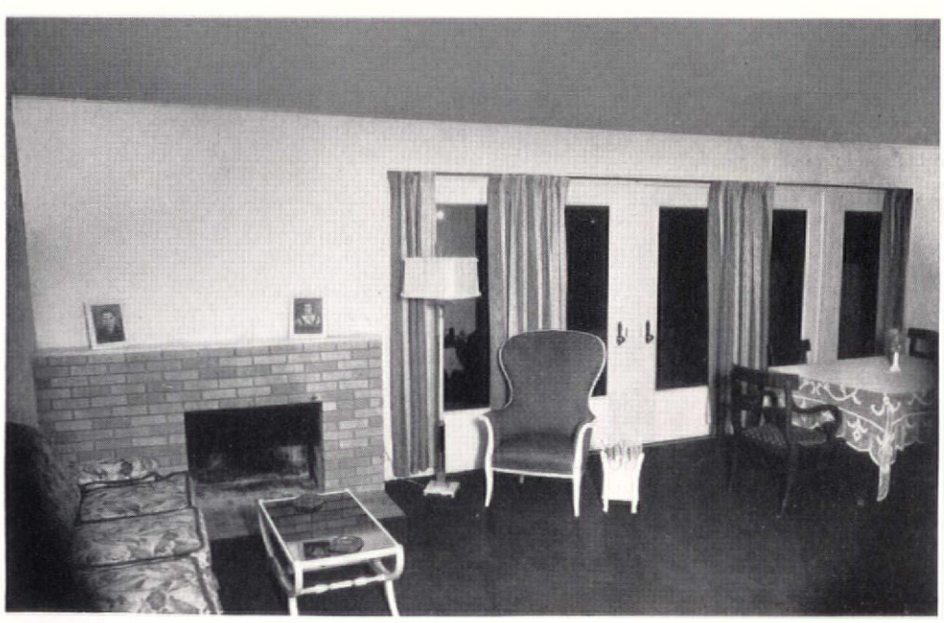


McCOOK, NEBR.
SHELDON BRUMBAUGH,
ARCHITECT

The spacious living room of this single-story, two bedroom house faces the rear of the plot, opening onto a generous paved terrace through a series of glazed doors. A comfortable stairway leads down to a basement playroom identical in size and shape with the living room, and fitted with a complete bar. Also on this level are a servant's room and bath. Cost: $5,700. Cubage: 25,000.

BASEMENT

FIRST FLOOR



CONSTRUCTION OUTLINE

STRUCTURE: Exterior walls—studs, shiplap sheathing, building paper, cement stucco over metal lath. Interior partitions—studs, lath and plaster. Floor construction—sub and fir finish.

ROOF: Covered with cedar shingles.

FIREPLACE: Damper—H. W. Covert Co.

SHEET METAL WORK: Flashing, gutters and leaders—galvanized iron.

INSULATION: Attic floor—rockwool.

WINDOWS: Sash—fir, casement. Glass—double strength, Libbey-Owens-Ford Glass Co.

FLOOR COVERINGS: Main rooms—carpet. Kitchen and bathrooms—linoleum.

WOODWORK: Fir throughout. Garage—Overhead Door Co.

HARDWARE: By Sargent & Co.

PAINTS: By Sherwin-Williams Co.

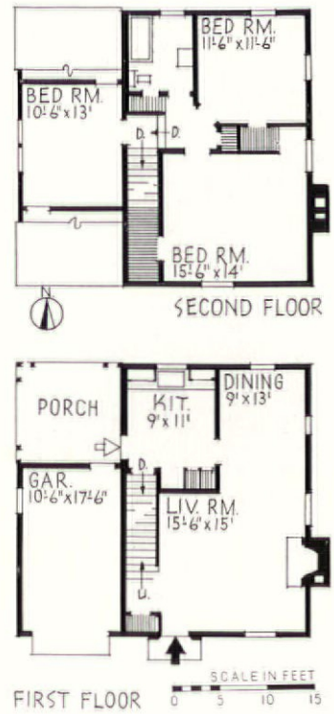
BATHROOM EQUIPMENT: By Americar Radiator-Standard Sanitary Corp.

PLUMBING: Soil pipes—cast iron. Hot and cold water pipes—galvanized iron.

HEATING: Warm air system, Campbell Co.

THREE BEDROOMS, ONE BATH, DINING ALCOVE, BASEMENT, ATTACHED GARAGE

COLUMBUS, OHIO RAYMOND D. GOLLER, ARCHITECT, A. I. A.

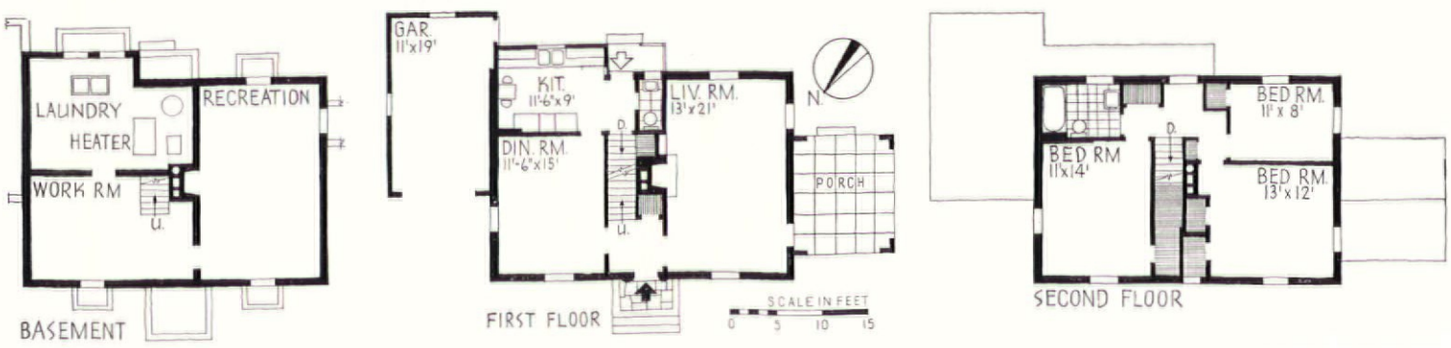


...DOWNSTAIRS LAVATORY, SEPARATE DINING ROOM

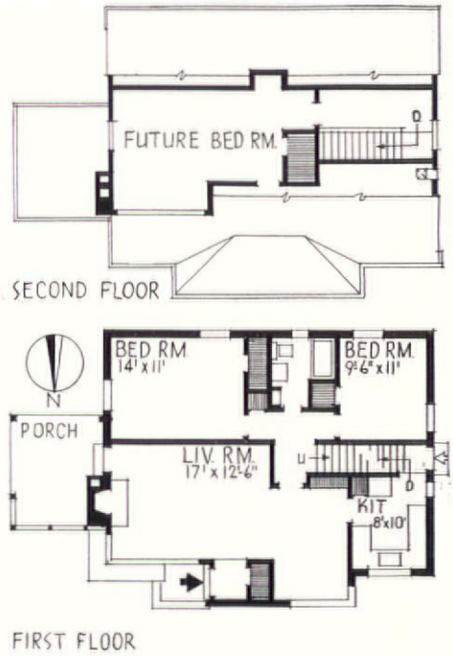
Frank Oberkoetter

PEORIA, ILL. JAMESON AND HARRISON, ARCHITECTS, A. I. A.

Both of the houses on this page employ the standard small house arrangement of three bedrooms and bath on the second floor and living room, dining space and kitchen on the first floor; each has an attached garage. The upper plan was worked out for a narrow lot, and is extremely compact and economical. The lower house, which is considerably wider, has a separate dining room opening off the central stairhall, and a kitchen lavatory. Upper house, 21,000 cubic feet, cost $7,160; lower house, 29,153 cubic feet, cost $11,932.



THREE BEDROOMS, ONE IN ATTIC, GROUND FLOOR BATH, DINING ALCOVE



DETROIT, MICH. HYDE & WILLIAMS, ARCHITECTS, A. I. A.

An interesting and carefully studied variation of the typical low cost plan, this house has two bedrooms and a bath on the first floor, a third bedroom in the space beneath the roof, reached by a stairway from the inside hall. Entrance vestibule and coat closet are placed at one side, creating an L in the living room which sets aside a definite portion for dining. Fenestration is generous; the living porch, at the front of the house, is screened from the street by wood louvers. Cost: $6,762. Cubage: 22,600.

Manning Bros. Photos

HOUSE IN COLUMBUS, OHIO

STRUCTURE: Exterior walls—wood frame, Bildrite sheathing, Insulite Co., building paper, redwood siding.

ROOF: Asphalt shingles, The Flintkote Co.

SHEET METAL WORK: Armco 26-gauge galvanized iron, American Rolling Mill Co.

WINDOWS: Sash—double hung, white pine, Huttig Sash & Door Co.; sliding, Andersen Corp. Glass—Lustraglass, single strength, The American Window Glass Co.

FLOOR COVERINGS: Living room and halls—Broadloom, Alexander Smith & Sons Carpet Co. Bedrooms—rugs. Kitchen and bathrooms—linoleum, Congoleum-Nairn, Inc.

WOODWORK: Exterior doors—Curtis Cos.

KITCHEN EQUIPMENT: Range — Magic Chef, American Stove Co. Refrigerator—Frigidaire Corp. Cabinets—Doddington Lumber Co.

BATHROOM EQUIPMENT: Lavatory — Crane Co. Tub, toilet, shower—American Radiator-Standard Sanitary Corp. Cabinets—The F. H. Lawson Co.

HEATING: Warm air, gas fired, filtering, humidifying, L. J. Mueller Furnace Co. Thermostat—Minneapolis-Honeywell Regulator Co.

HOUSE IN PEORIA, ILL.

STRUCTURE: Brick veneer, Vapor-Seal sheathing, Celotex Co., fir studs, Insulite Co. board, U. S. Gypsum Co. plaster.

INSULATION: Ground floor and outside walls—Balsam wool, Wood Conversion Co. Attic floor—rockwool, U. S. Gypsum Co.

WINDOWS: Double hung white pine. Glass—double strength, quality A, Libbey-Owens-Ford Glass Co.; structural and plate by Pittsburgh Plate Glass Co.

FLOOR COVERINGS: Kitchen—Armstrong Cork Co. Bath—tile, The Mosaic Tile Co.

ELECTRICAL INSTALLATION: Wiring — steel conduit, Westinghouse Electric & Mfg. Co. Switches—Hart & Hegeman Electric Co.

KITCHEN EQUIPMENT: Range — Estate Stove Co. Refrigerator, sink and dishwasher—General Electric Co.

BATHROOM EQUIPMENT: By Kohler Co. Cabinets—Miami Cabinet Div., Philip Carey Co.

PLUMBING: Water pipes—galvanized iron. Hot water pipes—wrought iron, A. M. Byers Co. Water softener--Elgin Softener Corp.

HEATING AND AIR CONDITIONING: Blower furnace, American Foundry & Furnace Co., humidifying, summer cooling.

HOUSE IN DETROIT, MICH.

STRUCTURE: Exterior walls—brick veneer, 1 in. air space, Bildrite sheathing, and Lok-joint lath, Insulite Co.

SHEET METAL WORK: Galvanized Armco iron throughout, American Rolling Mill Co.

WINDOWS: Sash—Fenestra, Detroit Steel Products Co. Glass—single strength, quality B, Pennvernon, Pittsburgh Plate Glass Co.

FLOOR COVERINGS: Kitchen and bathrooms—linoleum, Congoleum-Nairn, Inc.

WALL COVERINGS: Bathrooms—Linowall, Armstrong Cork Co.

ELECTRICAL INSTALLATION: Wiring system—conduit and Romex. Switches — Pass & Seymour Co.

KITCHEN EQUIPMENT: Range—J. L. Hudson. Refrigerator—Kelvinator Corp.

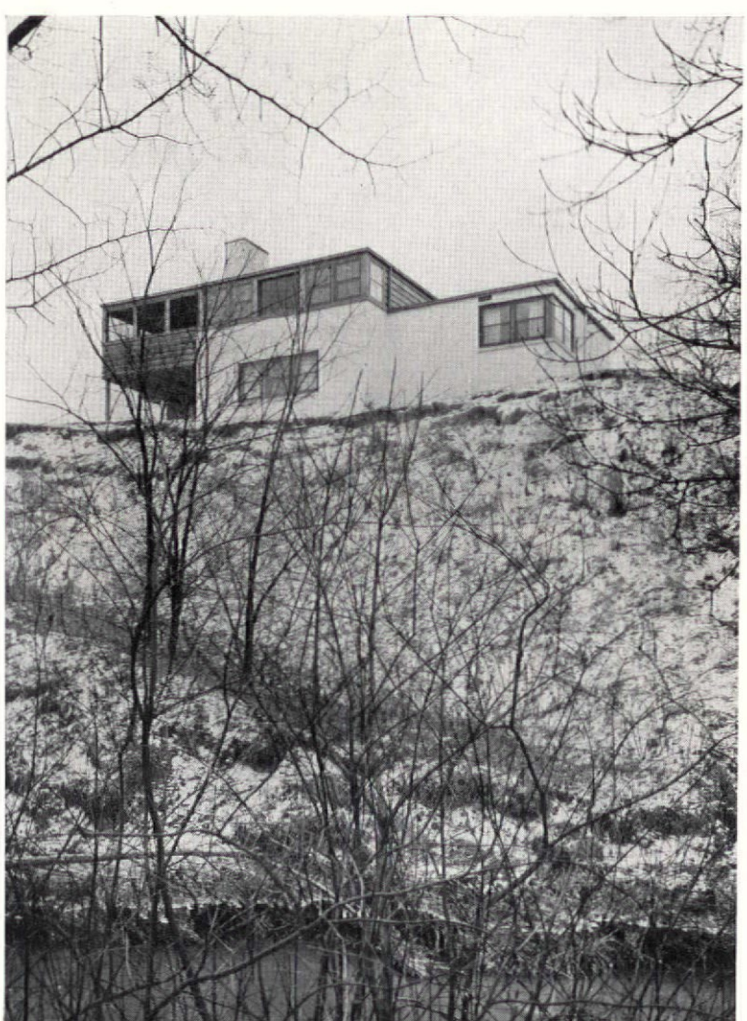
BATHROOM EQUIPMENT: By American Radiator-Standard Sanitary Corp. Cabinets—Miami Cabinet Div., Philip Carey Co.

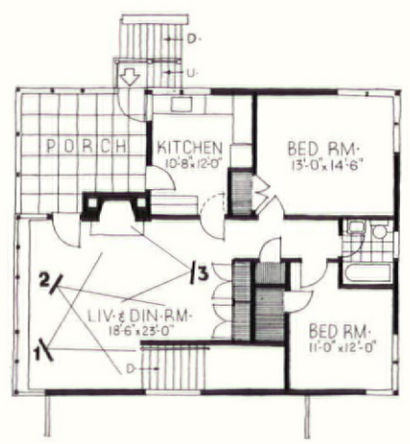
PLUMBING: Hot and cold water pipes—copper tubing, Chase Brass & Copper Co.

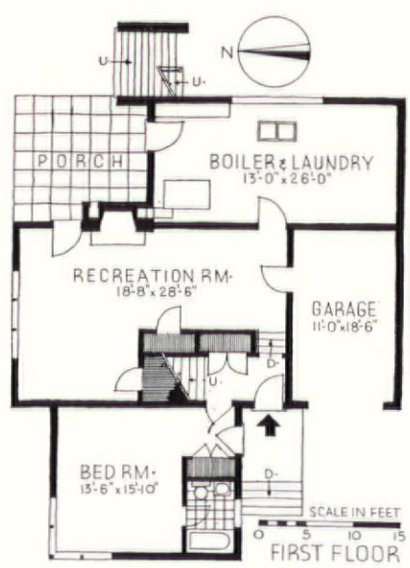
HEATING: Gas fired, winter air conditioning, filtering and humidifying, Bryant Heater Co. Grilles—Tuttle & Bailey, Inc. Thermostat—Minneapolis-Honeywell Regulator Co. Water heater—Crane Co.

THREE BEDROOMS, TWO BATHS, SECOND-FLOOR LIVING ROOM, RECREATION ROOM

All photos John L. Coburn

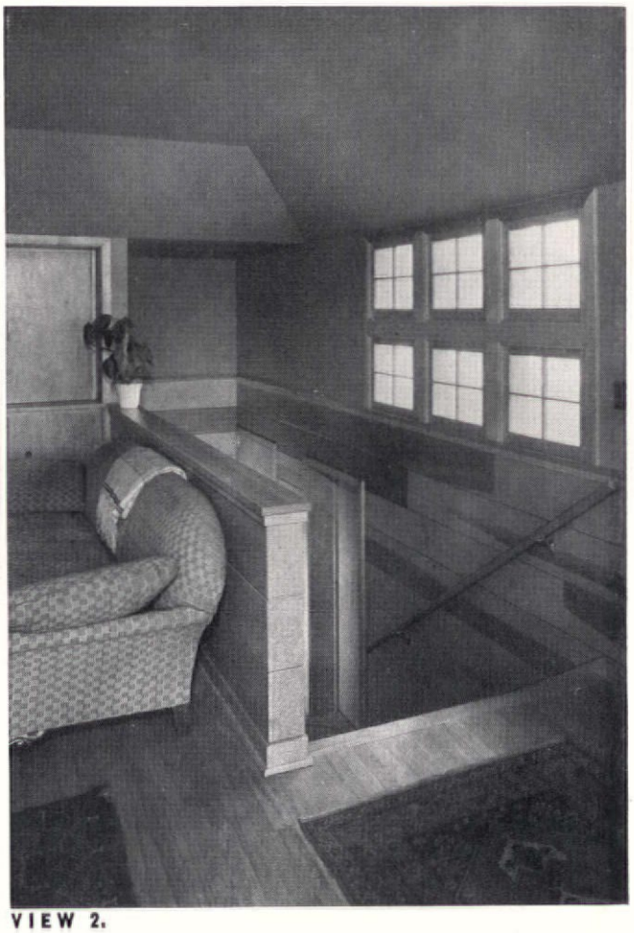




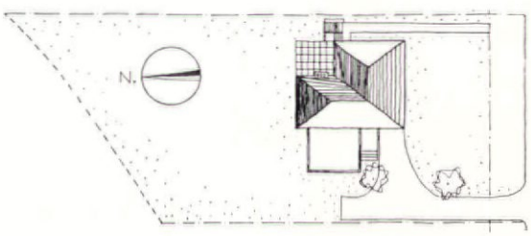


BIRMINGHAM, MICH. J. ROBERT F. SWANSON, ARCHITECT, A.I.A.

VIEW 1.



VIEW 2.



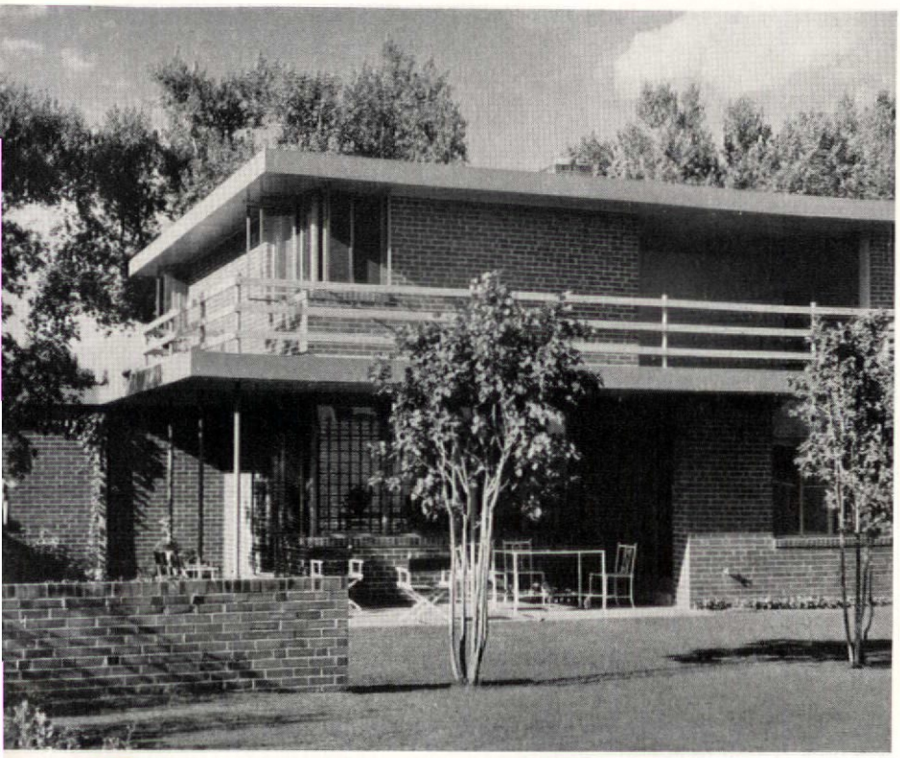
VIEW 3.

A reversal of the customary floor arrangement, with the living-dining area and kitchen on the second floor. A portion of the first floor is below ground level, with the garage and a corner of the laundry occupying this area. The remainder of the space is used for a bedroom and large recreation room. A very wide stair opens directly into the living room, as shown in the accompanying illustrations. Window areas are generous, with ample provision for sunlight and ventilation in all rooms. Cost: $11,200 excluding architect's fee. Cubage: 32,000.

CONSTRUCTION OUTLINE

STRUCTURE: Exterior walls—cement block and cedar siding; frame insulated, sheathed, building paper and siding. Interior—plaster.
ROOF: Covered with asbestos shingles, Philip Carey Co. Deck—covered with 10-yr. built-up.
SHEET METAL WORK: Flashing—Armco, American Rolling Mill Co.
INSULATION: Outside walls and roof—Red Top, U. S. Gypsum Co. Weatherstripping—Chamberlin Metal Weatherstrip Co.
WINDOWS: Sash—wood, double hung, N.S.W. Co. Glass—double strength, Libbey-Owens-Ford Glass Co.
FLOOR COVERINGS: Kitchen and bathrooms—linoleum, Congoleum-Nairn, Inc.
HARDWARE: By Russell & Erwin Mfg. Co.
ELECTRIC INSTALLATION: Wiring (circuit breaker)—Square D. Co. Switches—toggle.
KITCHEN EQUIPMENT: Range, refrigerator and disposal unit—General Electric Co. Cabinets—Whitehead Metal Co.
BATHROOM EQUIPMENT: By American Radiator-Standard Sanitary Corp. Cabinets — Miami Cabinet Div., Philip Carey Co.
PLUMBING: Water pipes—copper, Mueller Brass Co.
HEATING: Capitol-Aire—U. S. Radiator Corp. Thermostat—Minneapolis-Honeywell Regulator Co.

THREE BEDROOMS, TWO BATHS, MAID'S ROOM, UPSTAIRS LAUNDRY

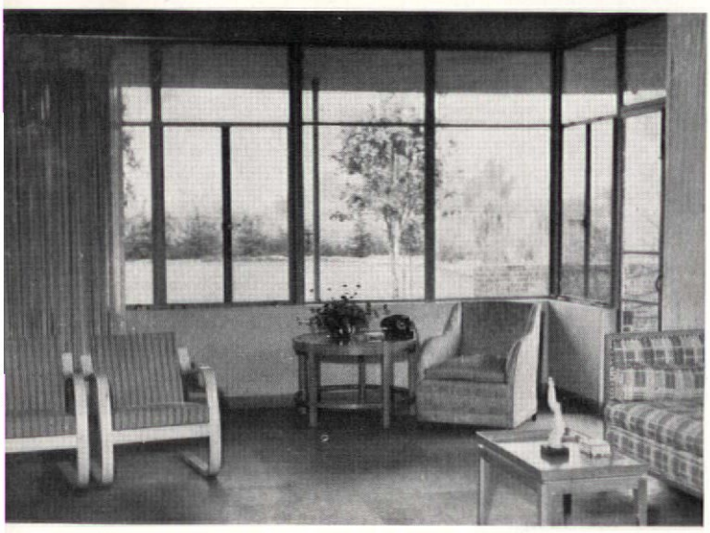


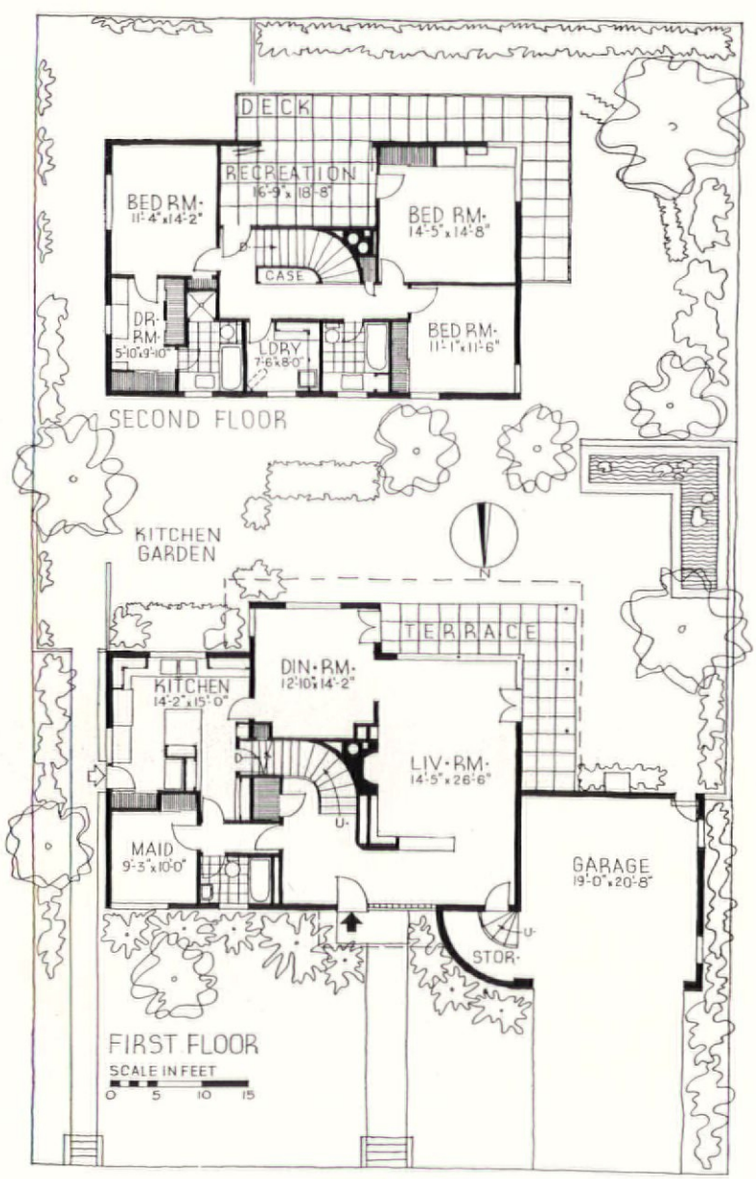
DENVER, COLO. THOMAS E. MOORE, ARCHITECT

A very attractive and dignified modern design, showing a good use of natural materials and some unusual plan features. Among the latter is the second floor laundry. There has been a noticeable trend toward getting the laundry out of the basement, but this is probably the first time it has been used on the second floor. The scheme is perfectly reasonable, since most of the linen is used on this floor and storage can also be provided in the laundry space. Of equal interest is the recreation room which can function as an open or enclosed space. Cost: about $13,500. Cubage: 30,000.

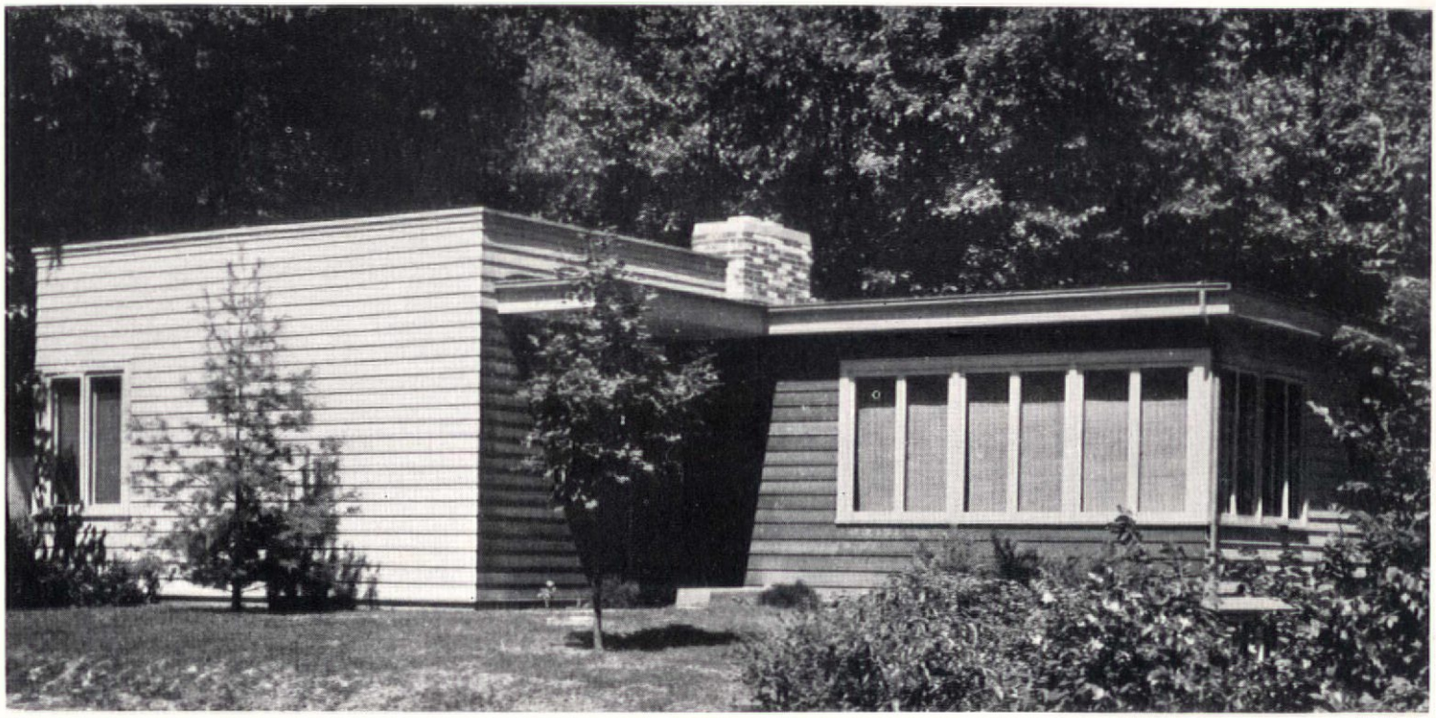
CONSTRUCTION OUTLINE

STRUCTURE: Exterior walls—8 in. brick, inside—plaster. Partitions—studs, U. S. Gypsum Co. rocklath and plaster.
ROOF: Covered with 15-yr. rolled roofing, Western Elaterite Co. Deck—covered with canvas.
INSULATION: Roof—Spray-o-flake Corp.
WINDOWS: Sash—Fenestra steel, Detroit Steel Products Co. Glass—double strength, Pittsburgh Plate Glass Co.
FLOOR COVERINGS: Living room—cork, Armstrong Cork Co. Nursery, kitchen and bathrooms—linoleum, Congoleum-Nairn, Inc. Halls—rubber tile.
KITCHEN EQUIPMENT: Range—Universal, Landers, Frary & Clark. Refrigerator—General Electric Co.
LAUNDRY EQUIPMENT: Washington machine—Bendix Home Appliances, Inc.
BATHROOM EQUIPMENT: By Crane Co.
HEATING: Forced warm air furnace, filtering and humidifying, L. J. Mueller Furnace Co. Thermostat—Minneapolis-Honeywell Regulator Co. Water heater—Crane Co.



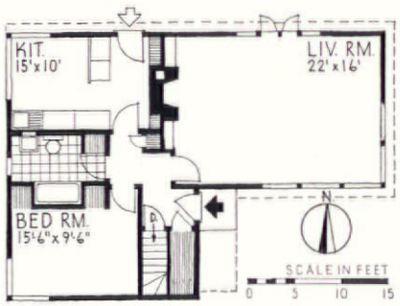


ONE BEDROOM AND BATH, PHOTOGRAPHIC STUDIO AND DARKROOM

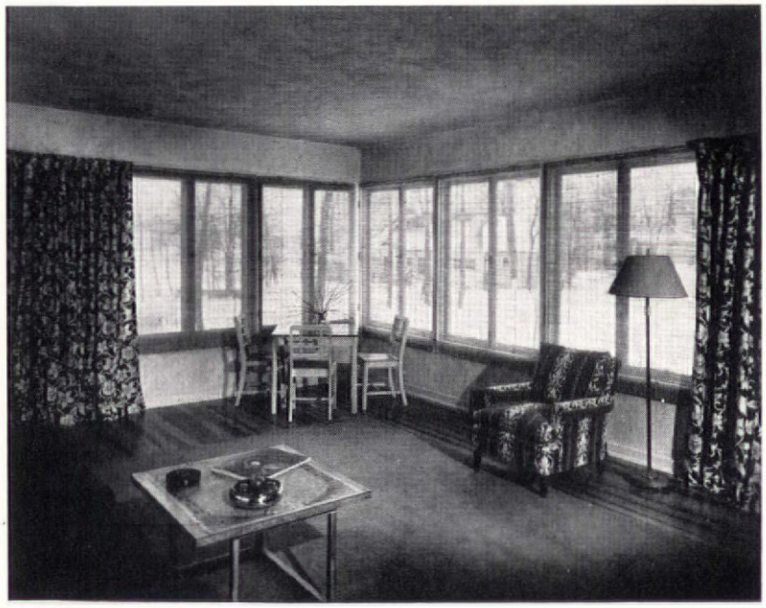


WILLIAMS BAY, WIS. SKIDMORE, OWINGS & MERRILL, ARCHITECTS, A.I.A.

Gerald Young Photos



This house includes a complete photographic studio and darkroom, a modest residential character being maintained by the simple expedient of putting the workrooms below ground. The solution is a good one, since no daylight is needed in the studio. The plan of the first floor shows virtually complete elimination of waste space and economical placing of plumbing fixtures. Location of the stair is excellent, as it combines easy circulation with complete privacy for the living quarters. Cost: $5,500. Cubage: 12,800.



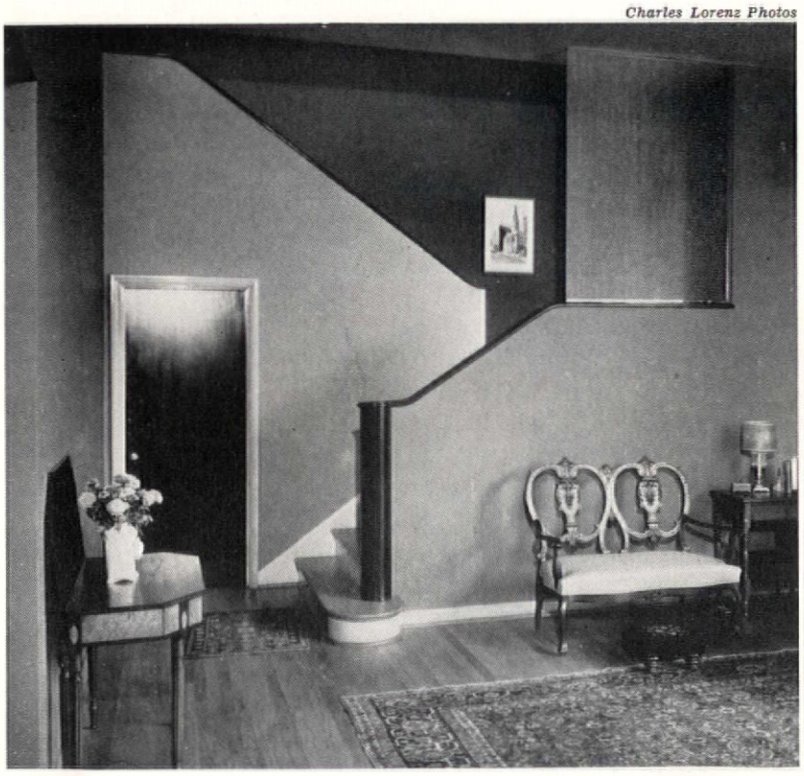
CONSTRUCTION OUTLINE

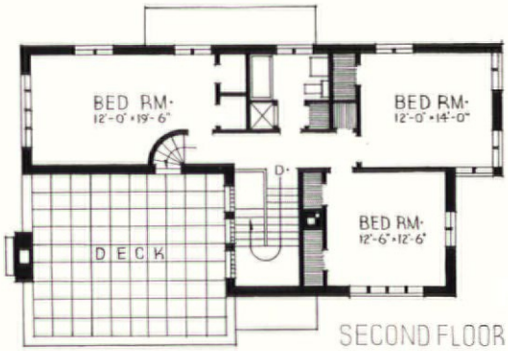
STRUCTURE: Exterior walls—cedar siding, building paper, wood sheathing; inside—rock lath and plaster.
ROOF: Built-up roofing, Johns-Manville.
FIREPLACE: Damper—Colonial Fireplace Co.
INSULATION: Outside walls and roof—Kimsul, Kimberly-Clark Corp. Weatherstripping—Athey Co.
WINDOWS: Sash—wood casement. Glass—Pennvernon, double strength, quality A, Pittsburgh Plate Glass Co.
FLOOR COVERINGS: Red oak throughout.
HARDWARE: By Yale & Towne Mfg. Co.
PAINTS: By Pratt & Lambert.
ELECTRICAL INSTALLATION: Switches—Westinghouse Electric & Mfg. Co. Fixtures—Solar Light Co.
BATHROOM EQUIPMENT: By Kohler Co.
HEATING: Hot air system. Grilles—Air-Flow, A. C. Gilbert Co. Regulators—Minneapolis-Honeywell Regulator Co.

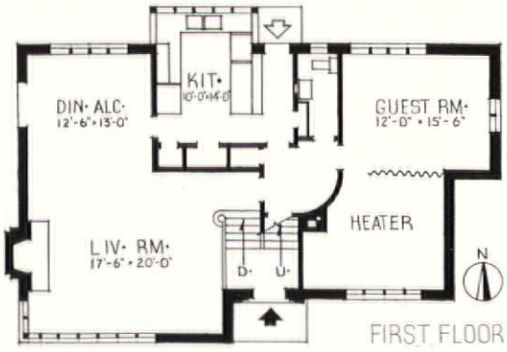
THREE BEDROOMS, GUEST-RECREATION ROOM, LAVATORY, DECK

UNIVERSITY CITY, MO. MURPHY & WISCHMEYER, ARCHITECTS, A.I.A. JOSEPH D. MURPHY, DESIGNER

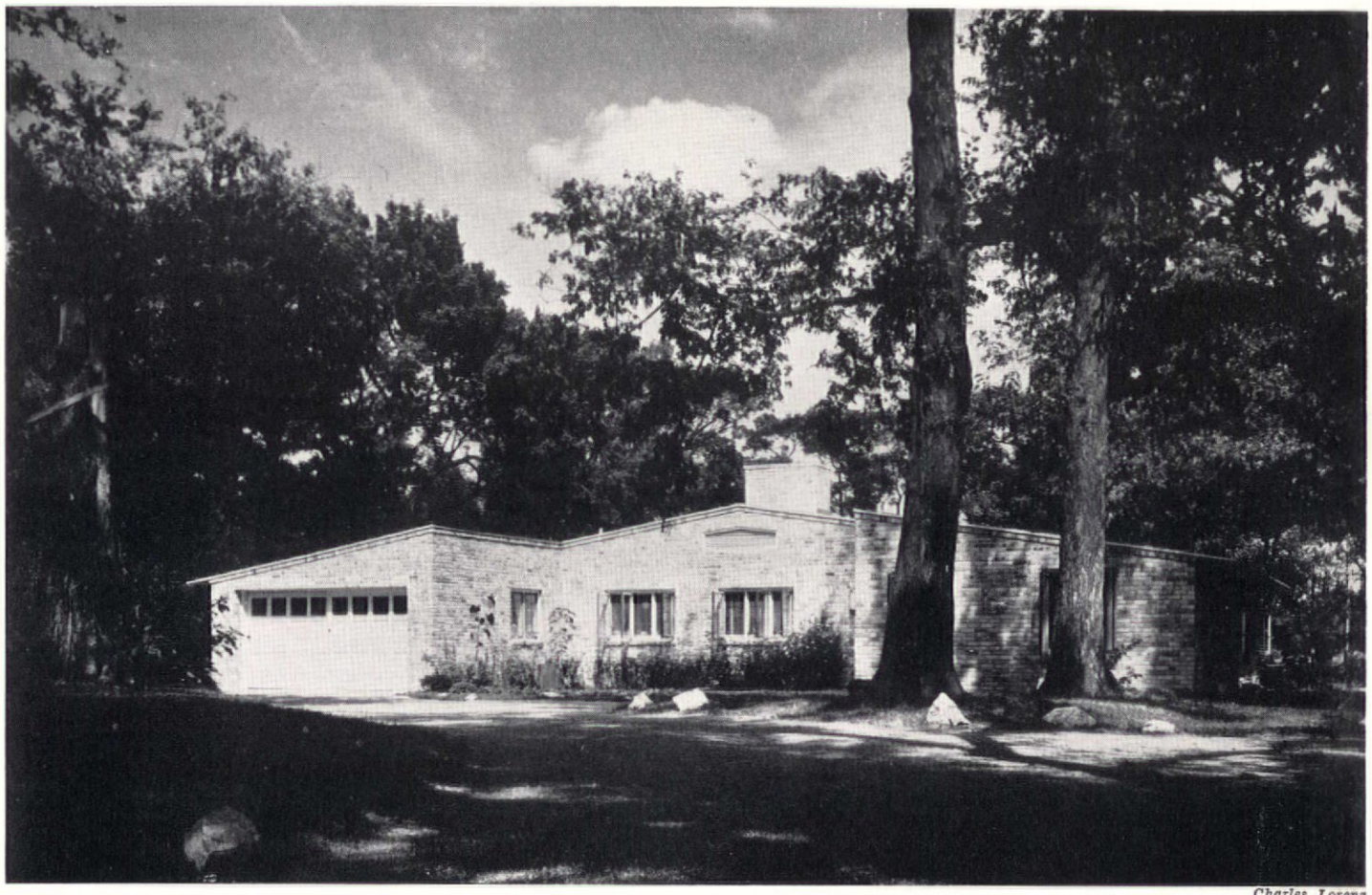
Charles Lorenz Photos







THREE BEDROOMS, TWO BATHS, DEN, LAUNDRY

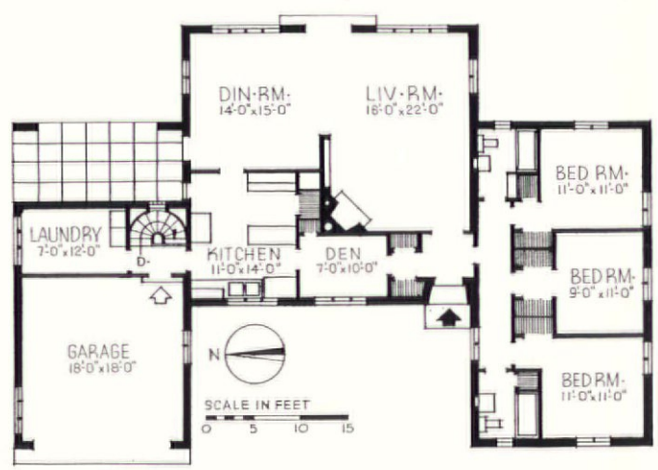


Charles Lorenz

SAINT LOUIS CO., MO. MURPHY & WISCHMEYER, ARCHITECTS, A.I.A.

The houses on these pages show a marked similarity of character in their use of brick and single-light casement windows. The plan of the two-story residence is ingenious, making excellent use of the entrance at the half level. What would ordinarily be the basement is occupied by a flexible space, suitable for recreation or guest accommodations. The living room, as shown in the interior view, has an unusually high ceiling. Cost: $10,120. Cubage: 25,300.

The one-story house has its major living units in definitely separated compartments, a living and dining room facing the rear. While the plan type is not uncommon, the scheme for the roof is: sheds on the wings continue up over the central portion to form a gable. Cost: $9,500.



HOUSE IN UNIVERSITY CITY, MO.

STRUCTURE: Exterior walls—used brick, tile back up, plaster directly on tile. Floor construction (1st.)—clear oak finish on concrete slab; (2nd.)—joists, sub-floor, clear oak finish.

ROOF: Covered with asphalt shingles. Deck—canvas over built-up.

INSULATION: Batt form, U. S. Gypsum Co.

WINDOWS: Sash—casement, Rolscreen Co. Glass—double strength, quality A, Libbey-Owens-Ford Glass Co. Screens—Rolscreen Co. Glass blocks—Pittsburgh-Corning Corp.

ELECTRICAL INSTALLATION: Wiring system—two conductor armored wire. Switches—Arrow-Hart & Hegeman Electric Co.

KITCHEN AND BATHROOM FIXTURES: By American Radiator-Standard Sanitary Corp.

PLUMBING: Water pipes—copper, Mueller Brass Co.

HEATING: Gas fired warm air system, General Installation Co.

HOUSE IN SAINT LOUIS CO., MO.

STRUCTURE: Exterior walls—brick, furring, plaster on composition insulation lath. Interior partitions—studs, plaster on wood lath. Floor construction—cork and asphalt over concrete slab.

ROOF: Covered with asphalt felt roofing.

INSULATION: Batt form, Eagle-Picher Co.

WINDOWS: Sash and screens—Rolscreen Co. Glass—double strength, quality A, Libbey-Owens-Ford Glass Co. Glass blocks—Owens-Illinois Glass Co.

ELECTRICAL INSTALLATION: Wiring system—two conductor armored wire work. Switches—Arrow-Hart & Hegeman Electric Co. Fixtures—Architectural Bronze Studio.

KITCHEN AND BATHROOM FIXTURES: By American Radiator-Standard Sanitary Corp.

PLUMBING: Water pipes—copper, Mueller Brass Co.

HEATING: Gas heating system. Water heater—gas-fired, American Gas Products.

TWO BEDROOMS, SEPARATE DINING ROOM, STUDIO

The spread-out plan fits the wooded hilltop very pleasantly, although the advantages of formal symmetry may be questioned, both in regard to the exterior effect and the plan. In the latter, the living room functions as a corridor to the bedrooms while the dining room gives access to the studio. The placing of the bath is unusual, and would seem to have disadvantages in view of the lack of a guest lavatory. The walls are executed in concrete block, with the horizontal joints raked, producing a strong shadow line every eight inches. Cost: $13,000. Cubage: 31,715.

CINCINNATI, OHIO. CARL SCHMUELLING, ARCHITECT, A.I.A.

Brand Photos

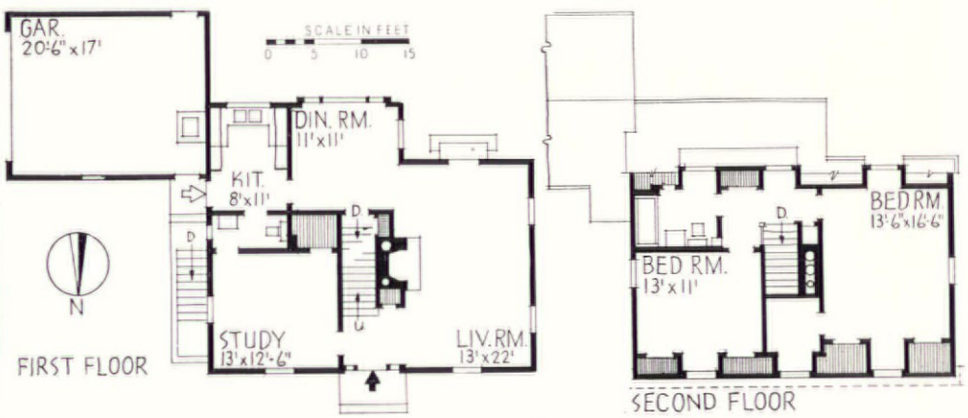
CONSTRUCTION OUTLINE

STRUCTURE: Exterior walls—8 in. hollow Waylite concrete blocks, Chicago Waylite Co., wood studs; inside—rocklath and plaster.
ROOF: Covered with interlocking clay tile, Ludowici-Celadon Co.
FIREPLACE: Damper—Donley Bros. Co.
SHEET METAL WORK: Flashing, gutters and leaders—Armco, American Rolling Mill Co.
INSULATION: Rockwool over entire ceiling areas and floor areas where unexcavated, Philip Carey Co.
WINDOWS: Sash—steel casement, Hope's Windows, Inc. Glass—double strength, quality A, Pennvernon, Pittsburgh Plate Glass Co.
FLOOR COVERINGS: Main rooms—oak strip, Cincinnati Floor Co. Kitchen and bathrooms—linoleum, Armstrong Cork Co.
WALL COVERINGS: Bathrooms—Linowall, Armstrong Cork Co.
WOODWORK: Door casings—metal, Milcor Steel Co. Cabinets—Building Products Co. Doors—Curtis Cos.
HARDWARE: By J. B. Schroder Hardware Co.
PAINTS: By E. I. Du Pont de Nemours & Co. and Portland Cement Co.
KITCHEN EQUIPMENT: Range and refrigerator—Frigidaire Corp.
BATHROOM FIXTURES: Crane Co.
PLUMBING: Pipes by Revere Copper & Brass Co.
HEATING: Forced hot water, oil fired system, Modine Mfg. Co. General Electric Co. oil furnace. Thermostat—Minneapolis-Honeywell Regulator Co. Fan—Victor Electric Products, Inc.

TWO BEDROOMS, ONE BATH, STUDY-GUEST ROOM, LAVATORY, ATTACHED GARAGE

OXFORD, OHIO. POTTER, TYLER & MARTIN, ARCHITECTS, A.I.A.

The influence of early dwelling types of Ohio and upper New York is visible in the small second-floor windows which fit into a narrow horizontal band on the front elevation. The effect is confined to the front, however, as the other exterior view is a display of contemporary Colonial in all of its complexity. The plan is excellent: compact, economically arranged, with adequate rooms and good closets. Cost: $8,964. Cubage: 31,365.



CONSTRUCTION OUTLINE

STRUCTURE: Exterior walls—cypress siding, waterproof paper, yellow pine sheathing; inside—studs, gypsum lath and plaster. Floor construction—yellow pine sub-floor, felt, oak and yellow pine finish.

ROOF: Covered with red cedar shingles.

INSULATION: Roof—Balsam wool, Wool Conversion Co. Weatherstripping—Chamberlin Metal Weatherstrip Co.

WINDOWS: Sash—wood sliding and storm sash. Glass—single strength, quality B, Libbey-Owens-Ford Glass Co.

FLOOR COVERINGS: Kitchen and bathrooms—linoleum, Armstrong Cork Co.

HARDWARE: By Lockwood Hardware Mfg. Co.

ELECTRICAL INSTALLATION: Wiring system—3-wire. Switches—Bryant Electric Co.

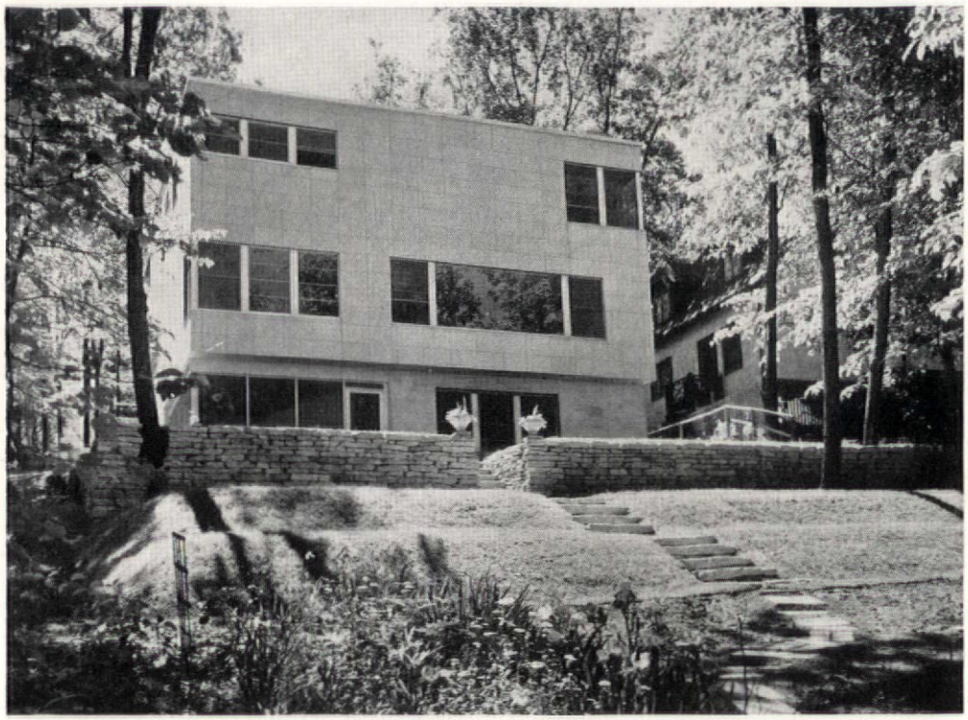
KITCHEN EQUIPMENT: Range, refrigerator, dishwasher and garbage disposal unit—Hot Point, Edison-General Electric Appliances, Inc. Cabinets—steel, Sears-Roebuck.

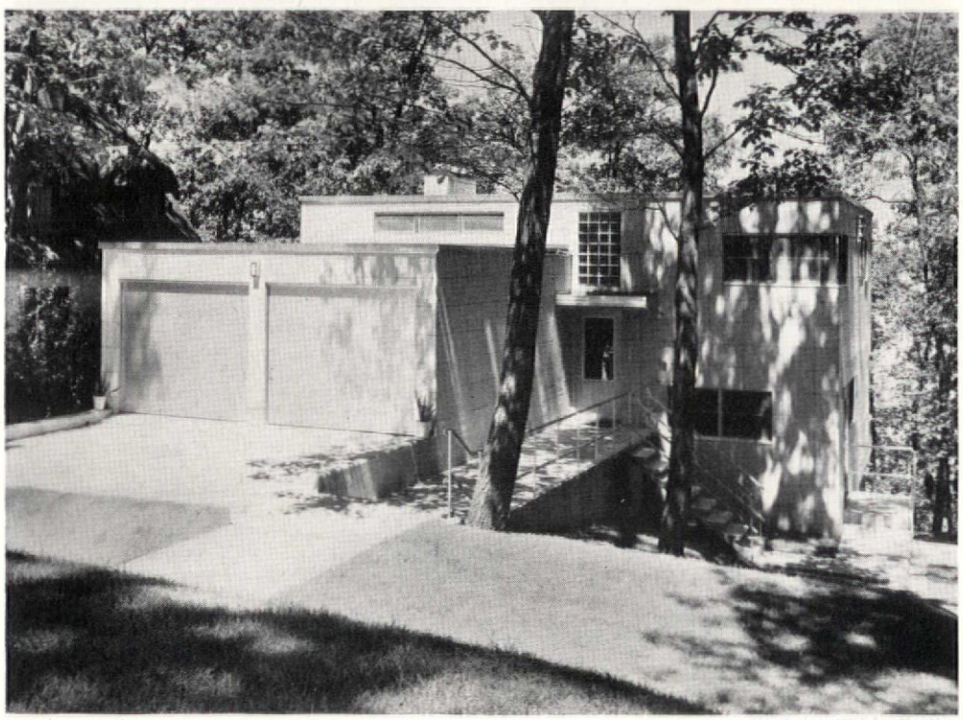
BATHROOM EQUIPMENT: By American Radiator-Standard Sanitary Corp. Cabinets—Miami Cabinet Div., Philip Carey Co.

PLUMBING: Water pipes—copper tubing. Water softener—Permutit Co.

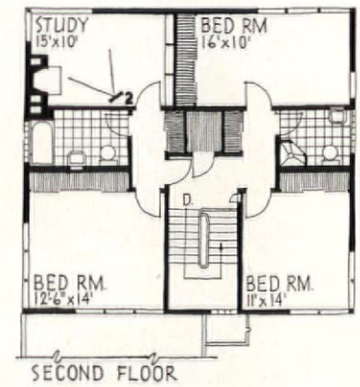
HEATING: Forced warm air system, Rudy Furnace Co. Grilles—Tuttle & Bailey, Inc. Thermostat—Minneapolis-Honeywell Regulator Co. Water heater—Edison-General Electric Appliances, Inc. Fan—Victor Electric Products, Inc.

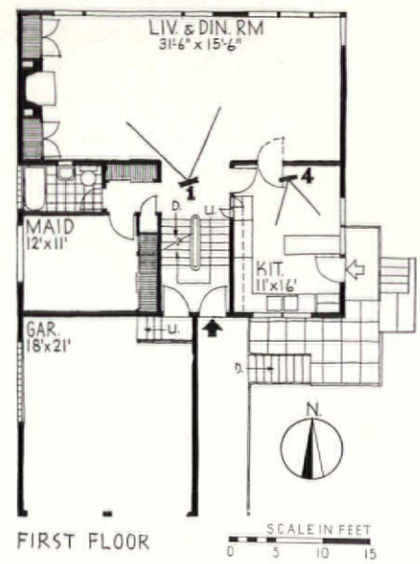
THREE BEDROOMS, TWO BATHS, MAID'S ROOM AND BATH, RECREATION ROOM

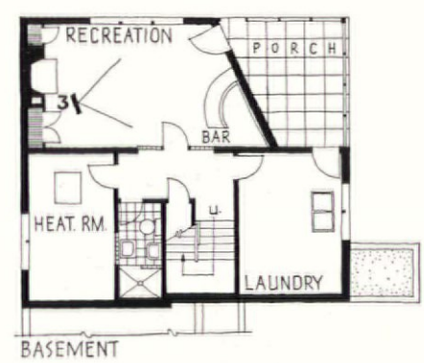


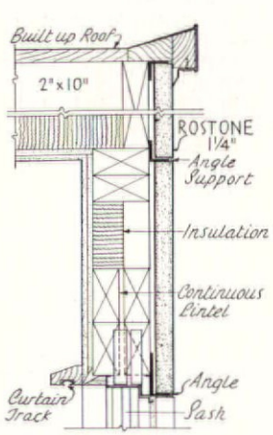


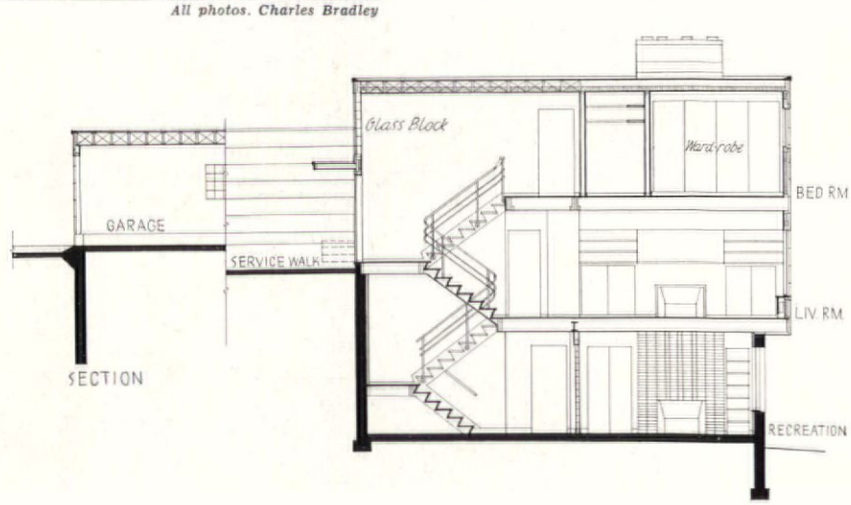
All photos. Charles Bradley











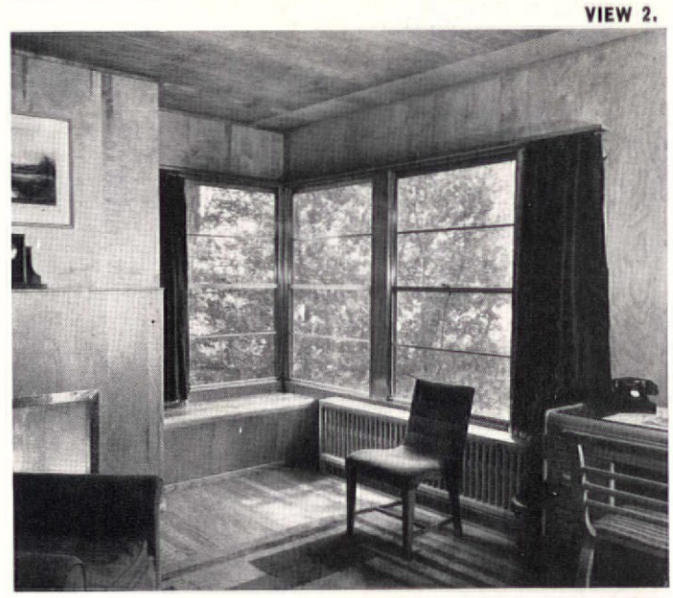
VIEW 1.

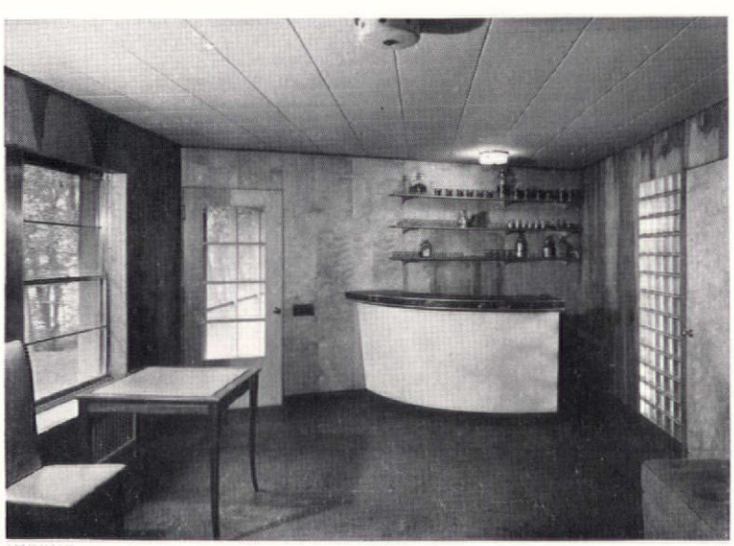
CONSTRUCTION OUTLINE

STRUCTURE: Exterior walls—1¼ in. Rostone on steel shelf angles, wood studs, mineral wool, insulating plaster base and plaster. Interior partitions—wood studs, U. S. Gypsum Co. rocklath and plaster.
ROOF: 4-ply tar and gravel roofing.
SHEET METAL WORK: Flashing—copper. Coping—sheet aluminum. Leaders—cast iron.
INSULATION: Outside walls and roof—mineral wool, U. S. Gypsum Co.
WINDOWS: Sash—aluminum double hung and hinged. Glass—single strength, quality A, Pittsburgh Plate Glass Co. Glass blocks—Pittsburgh-Corning Corp.
FLOOR COVERINGS: Living room—cellized white oak, E. L. Bruce Co. Bedrooms and halls—strip oak. Kitchen—linoleum, Armstrong Cork Co.
WOODWORK: Doors—"Sturdibilt," M. & M. Woodworking Co. Garage doors—fir plywood and Presdwood, Masonite Corp.
HARDWARE: By Schlage Lock Co.
PAINTS: By Pittsburgh Plate Glass Co. and L. Sonneborn Sons, Inc.
ELECTRICAL INSTALLATION: Wiring system—BX. Switches—General Electric Co.
PLUMBING: Soil and vent pipes—cast iron and galvanized steel. Water pipes—copper.
HEATING: Hot water system. Boiler, radiators and water heater—Weil-McLain Co. Kitchen fan—Ilg Electric Ventilating Co.

The architects comment: "The house was designed for a family of four. It was built on four levels, so adjusted to the site that very little grading was required. Permanent materials used on the exterior reduce maintenance to a small amount of painting for the wood trim. The plan provides a private hallway, study, bath and bedroom for the parents, a private suite for the children, a large living-dining room and a smaller recreation room. The last named has direct access to a screened porch at grade level overlooking the lake. There is a ground floor bathroom with shower for the convenience of summer lake bathers." Cubage: 38,500.

VIEW 2.

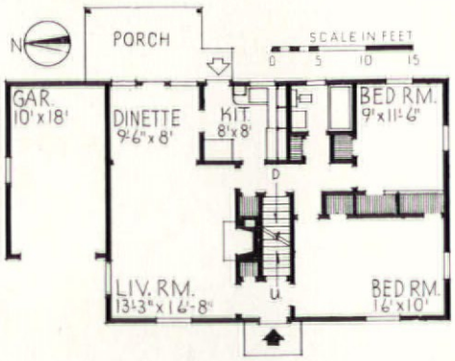




VIEW 3.

VIEW 4.

TWO BEDROOMS, BATH, LIVING-DINING ROOM, ATTACHED GARAGE



The location of the stairs in this compact plan permits the creation of a small vestibule with direct access to the larger of the bedrooms. Plumbing fixtures are placed back to back for economy. Due to the combination of living room and dinette the former enjoys a clear space of 26 ft. in one direction and sixteen in the other, more than is customarily obtainable in a house of this size. Cost: $6,000. Cubage: 25,000.

KANSAS CITY, KANSAS. EDWARD W. TANNER & ASSOCIATES, ARCHITECTS, A.I.A.

Tyner-Murphy

CONSTRUCTION OUTLINE

STRUCTURE: Exterior walls—Royal shingles, 1 x 8 in. boxing, studs, blanket insulation; inside—U. S. Gypsum Co. rocklath and plaster. Floor construction—sub-floor, asphalt saturated felt, red oak finish.

ROOF: Covered with red cedar shingles.

SHEET METAL WORK: Flashing—40 lb. tin; remainder—galvanized iron.

INSULATION: Outside walls—blanket insulation. Attic floor—rockwool.

WINDOWS: Sash—white pine, double hung, Andersen Corp. Glass—single strength, quality B.

FLOOR COVERINGS: Kitchen and bathrooms—linoleum, Armstrong Cork Co.

WALL COVERINGS: Main rooms—wallpaper. Kitchen—canvas. Bathrooms—Linowall, Armstrong Cork Co.

WOODWORK: Trim and cabinets—white pine. Doors—stock, Colonial. Garage doors—Overhead Door Co.

HARDWARE: By Sager Lock Co.

PAINTS: By Cook Paint Co.

ELECTRICAL INSTALLATION: Wiring system—BX. Switches—toggle, Bryant Electric Co. Fixtures—Stephens Chandelier Co.

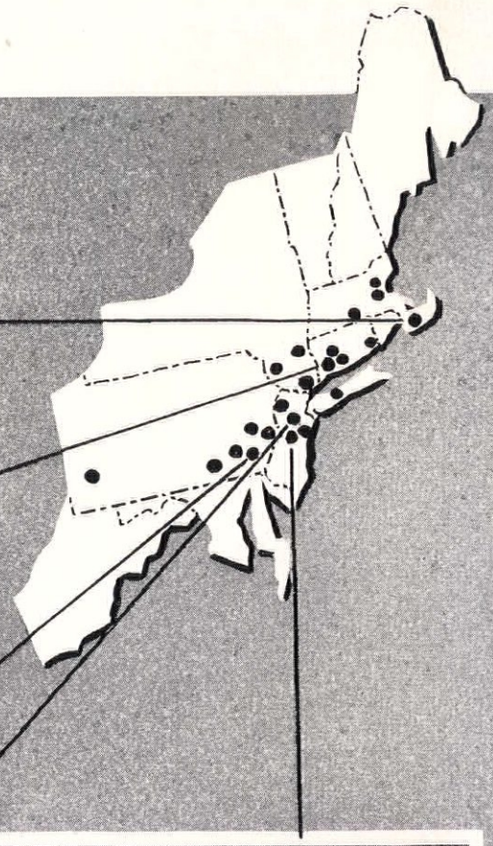
BATHROOM EQUIPMENT: By Eljer Mfg. Co. Cabinets—Hallenscheid & McDonald.

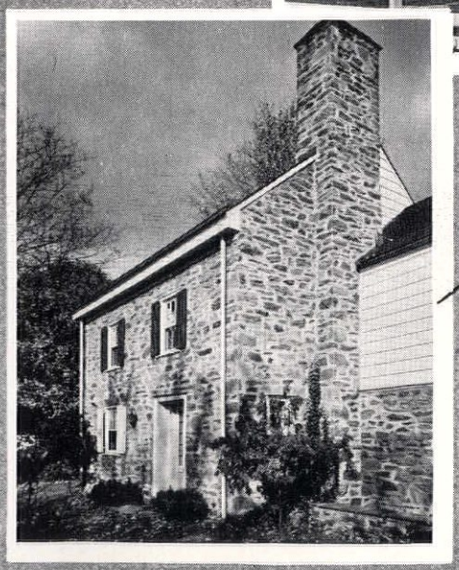
PLUMBING: Soil pipes—cast iron. Hot and cold water pipes—galvanized iron.

HEATING: Warm air system, filtering and humidifying. L. J. Mueller Furnace Co. Grilles—Independent Register Co. Thermostat—Minneapolis-Honeywell Regulator Co. Water heater—General Water Heater Co.

EAST

The East has long been the dominant cultural center of the U. S. and its early architecture has become the most influential of all residential types. Winters vary from mild to very cold according to latitude; summers are uniformly warm with high humidity. Wood, the traditional building material, is still the most commonly used but is largely imported; brick and stone are plentiful, and the proximity to industrial centers permits the rapid introduction of new products. This region has been most strongly influenced by European trends in building, notably the International Style. In their attempt to develop a more palatable style, the younger architects are now following the lead of the Californians.

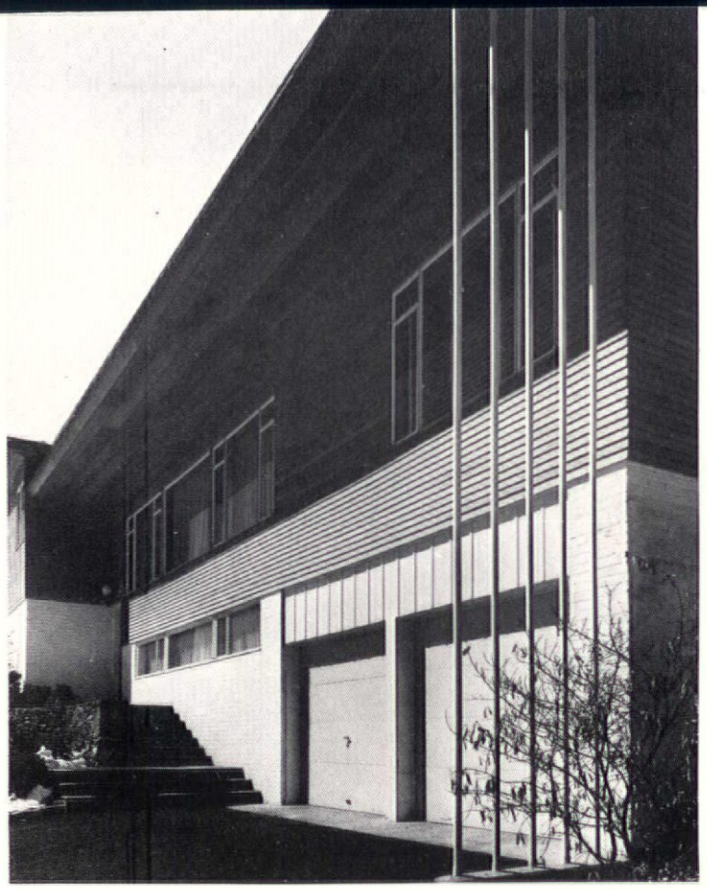




THREE BEDROOMS, TWO BATHS, WORK ROOM, ATTACHED GARAGE, BASEMENT

MOUNTAINSIDE, N. J. KENNETH KASSLER, ARCHITECT

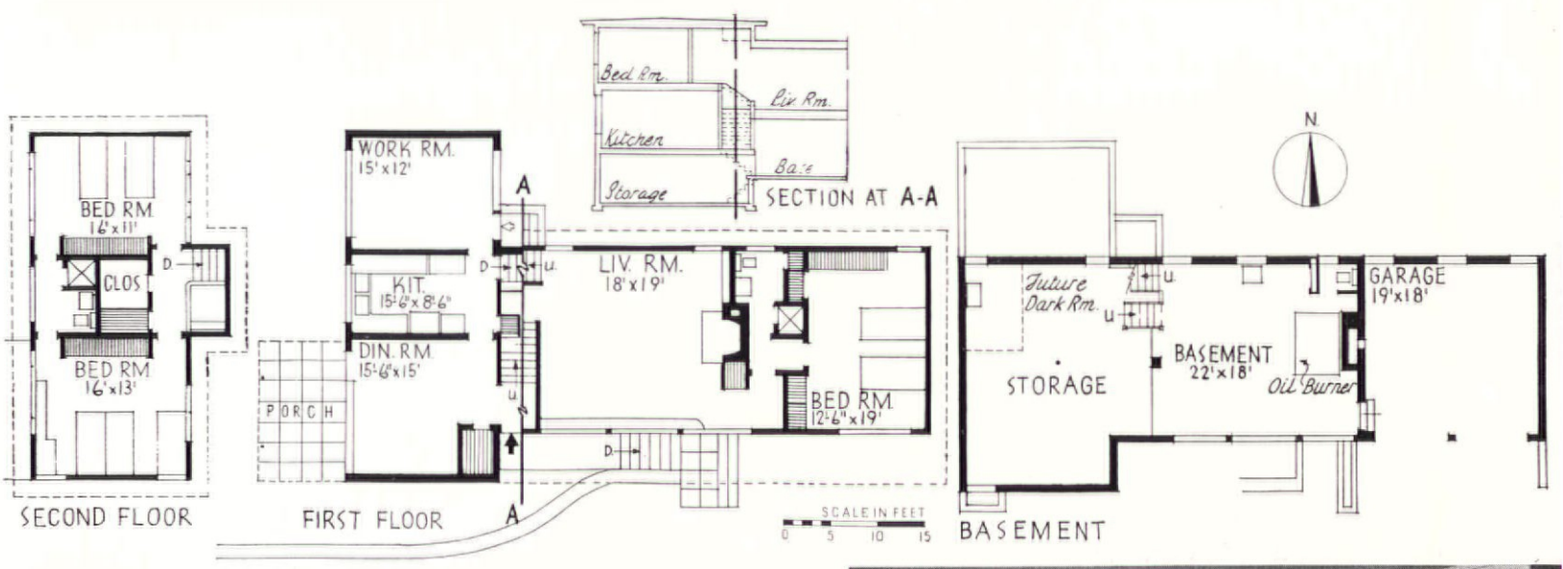
Robert M. Damora Photos

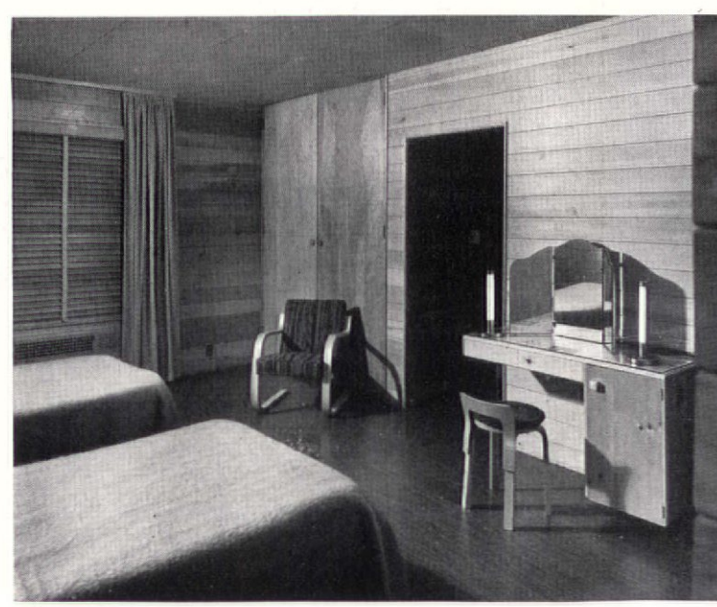


There has been a definite attempt in this house to relieve the severity of form by emphasis on texture, as in the narrowly spaced clapboards which enclose the upper story and in the high pipe trellis at the east end. These efforts have been successful in the interiors where the use of wood boards and veneers has created an appearance of comfort and livability. The crisp, orderly plans show an interesting arrangement on half-levels which developed from the contours of the land. Cubage: 35,800.

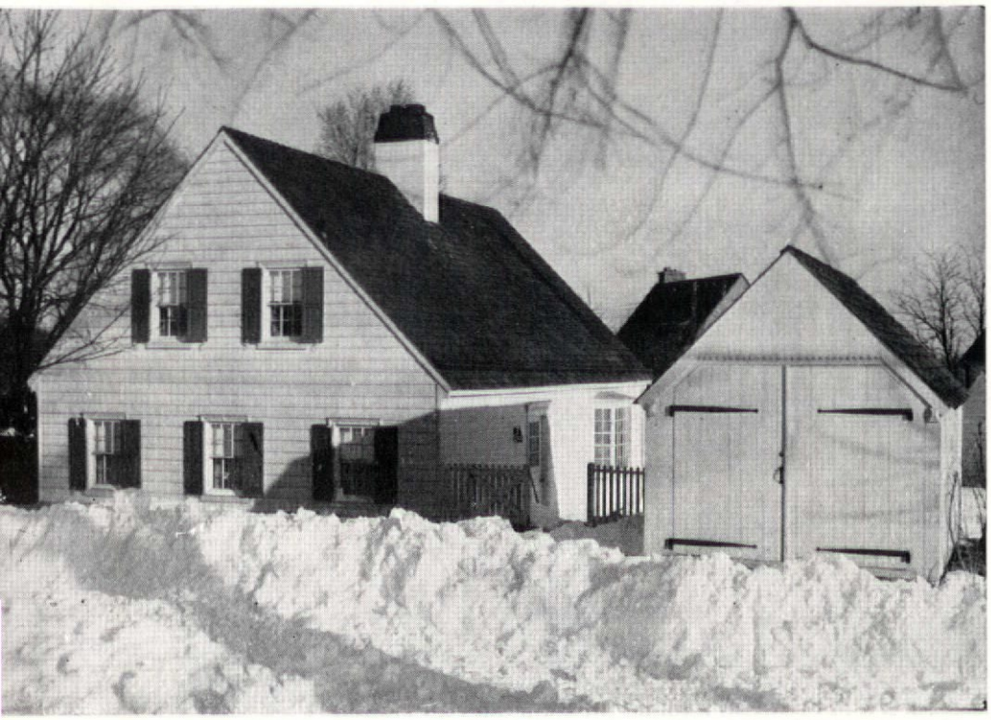
CONSTRUCTION OUTLINE

STRUCTURE: Exterior walls—brick and cypress clapboards, studs, Sisalkraft Co. paper, Celotex Corp. Vaporseal sheathing; inside — knotty pine, vertical grain fir or lath and plaster interior finish. Ceilings—Armstrong Cork Co. Corkoustic over U. S. Gypsum Co. rocklath.
FIREPLACE: Damper—H. W. Covert Co.
WINDOWS: Sash—Croft Steel Windows, Inc. Glass—plate, Pittsburgh Plate Glass Co.
FLOOR COVERINGS: Linoleum throughout, Armstrong Cork Co.
WALL COVERINGS: Main rooms—knotty pine or vertical grain fir. Bathrooms—Linowall, Armstrong Cork Co.
PAINTS: By Devoe & Raynolds Co.
ELECTRICAL INSTALLATION: Wire system—BX. Switches—Pass & Seymour. Fixtures—Kurt Versen Co.
KITCHEN EQUIPMENT: Refrigerator—Hot Point, Edison-General Electrical Appliances, Inc. Fittings—Speakman Co.
BATHROOM EQUIPMENT: Fixtures by Crane Co. Shower doors—Lehman Sprayshield Co.
PLUMBING: Hot and cold water pipes—copper tubing.
HEATING: Circulated hot water system, oil fired boiler. Boiler and radiators—U. S. Radiator Co. Regulators—Minneapolis-Honeywell Regulator Co.

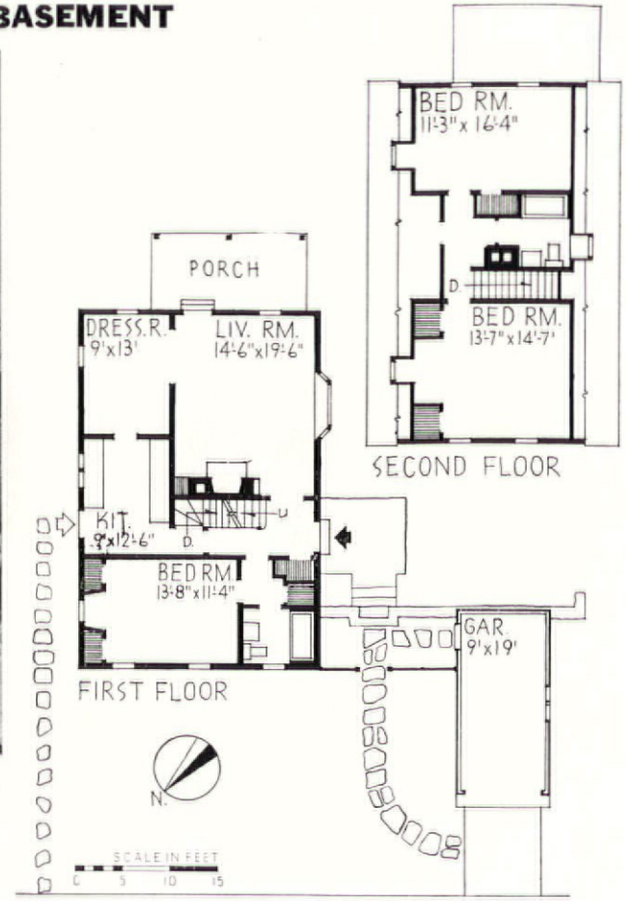




THREE BEDROOMS, TWO BATHS, DINING ROOM, BASEMENT



BRYN ATHYN, PA. BERNINGER & BOWER, ARCHITECTS, A.I.A.

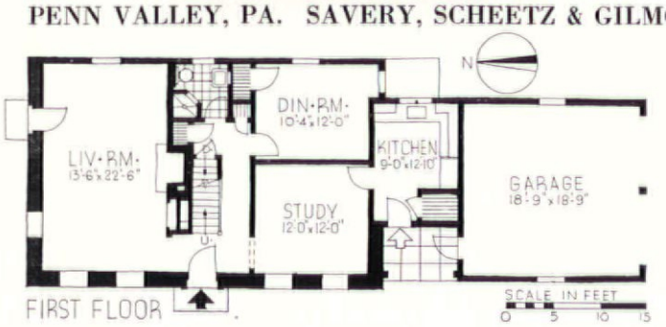


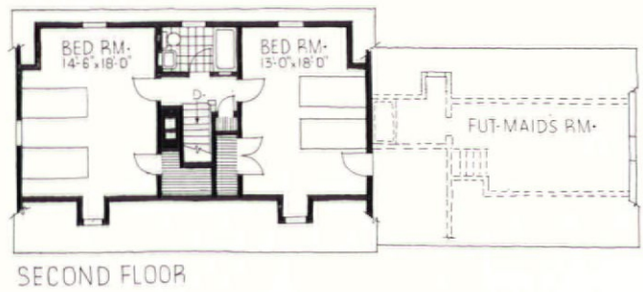
TWO BEDROOMS, TWO BATHS, STUDY, DINING ROOM, BASEMENT

Lewis P. Tabor

PENN VALLEY, PA. SAVERY, SCHEETZ & GILMOUR, ARCHITECTS, A.I.A.

Both of these houses use the familiar central stairway plan which provides two bedrooms and a bath on the second floor. They are also somewhat similar in the use of the garage as a device for increasing the apparent size of the house. The example below is further developed in this respect, the kitchen and covered porch serving as a link between house and garage. House in Bryn Athyn, cost: $5,986; cubage: 24,600. House in Penn Valley, cost: $8,792; cubage: 32,340.



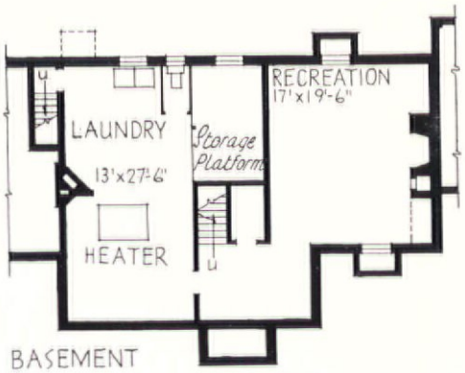


FOUR BEDROOMS, TWO BATHS, MAID'S ROOM AND BATH, ATTACHED GARAGE

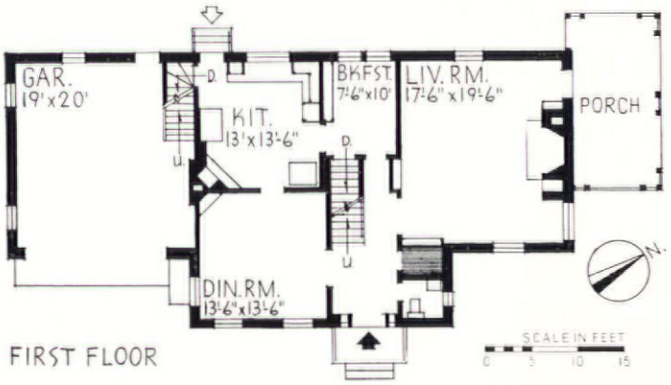
R. T. B. Hand

NUTLEY, N. J. McMURRAY & SCHMIDLIN, ARCHITECTS

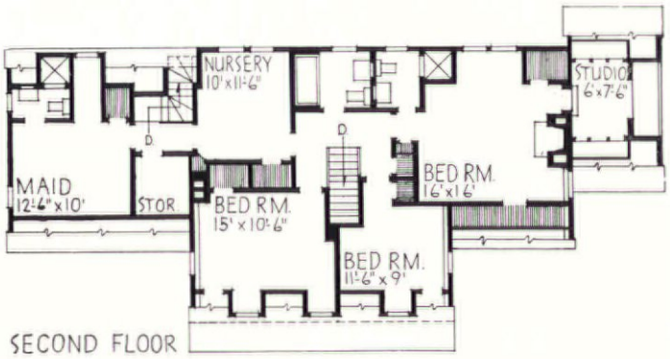
A careful and sympathetic handling of local tradition is the outstanding characteristic of this house, which used a dressed native stone, the old style double-hung windows and other details of the period. The house is a sizable one, despite the impression given by the view of the exterior, with five sleeping rooms and a small studio on the second floor. Cost: $15,994. Cubage: 37,400.



BASEMENT



FIRST FLOOR



SECOND FLOOR

HOUSE IN BRYN ATHYN, PA.

STRUCTURE: Exterior walls—frame, sheathing, Sisalkraft Co. paper, Perfection red cedar shingles; inside—U. S. Gypsum Co. rocklath and plaster. Floor construction—sub-floor asphalt felt, red oak finish.
ROOF: Covered with red cedar shingles.
FIREPLACE: Damper—H. W. Covert Co.
SHEET METAL WORK: Flashing and gutters—40 lb. roofing tin. Leaders—Toncan iron, Republic Steel Corp.
INSULATION: Roof—4 in. rockwool batts.
WINDOWS: Sash—wood, double hung and casement. Glass—single strength, Pennvernon, Pittsburgh Plate Glass Co.
FLOOR COVERINGS: Main rooms — oak. Kitchen and bathrooms — linoleum, Armstrong Cork Co.
WOODWORK: Trim and doors—stock, Morgan Sash & Door Co.
HARDWARE: By P. & F. Corbin.
PAINTS: By L. Sonneborn Sons, Inc.
ELECTRICAL INSTALLATION: Wiring system—BX.
BATHROOM EQUIPMENT: By American Radiator-Standard Sanitary Corp. Cabinets—Miami Cabinet Div., Philip Carey Co.
PLUMBING: Soil pipes—cast iron. Hot and cold water pipes—copper tubing.
HEATING: Warm air system, filtering and humidifying, Heil Co. Regulators—Minneapolis-Honeywell Regulator Co.

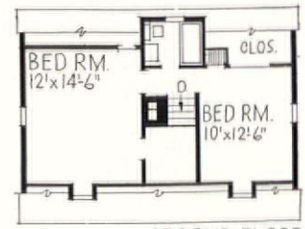
HOUSE IN PENN VALLEY, PA.

STRUCTURE: Exterior walls—18 in. stone and frame weatherboards. Interior partitions—stud and sand finish plaster.
ROOF: Covered with red cedar shingles.
FIREPLACE: Damper—H. W. Covert Co.
SHEET METAL WORK: Flashing— 2 oz. copper armored, Sisalkraft Co. Gutters and leaders—Toncan metal, Republic Steel Corp.
INSULATION: Roof—4 in. Red Top wool, U. S. Gypsum Co.
WINDOWS: Sash—Idaho white pine. Glass—Pittsburgh Plate Glass Co.
FLOOR COVERINGS: Main rooms—oak. Kitchen and bathrooms—linoleum.
HARDWARE: By Russell & Erwin Mfg. Co.
PAINTS: By Devoe & Raynolds Co.
ELECTRICAL INSTALLATION: Wiring system—BX.
KITCHEN EQUIPMENT: Range and refrigerator—Stewart-Warner Corp. Sink—Hajoca Co.
BATHROOM EQUIPMENT: All fixtures by Hajoca Co. Cabinets—Kleer-Vue, Steel & Wike.
PLUMBING: Soil pipes—cast iron. Hot and cold water pipes—copper, Mueller Brass Co.
HEATING AND AIR CONDITIONING: Warm air—oil No. 322 Duotherm air conditioning unit, summer cooling, Motor Wheel Corp. Grilles—Tuttle & Bailey, Inc. Water heater—Motor Wheel Corp.

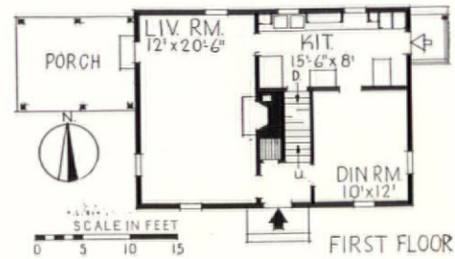
HOUSE IN NUTLEY, N. J.

STRUCTURE: Exterior walls—studs, shiplap sheathing, red cedar Royal shingles, brownstone veneer; inside—U. S. Gypsum Co. rocklath and plaster. Floor construction—sub-floor, T. & G. pine or red oak finish.
ROOF: Covered with red cedar shingles. Deck—covered with Con-Ser-Tex canvas, William L. Barrel Co.
FIREPLACE: Dampers—H. W. Covert Co.
INSULATION: Outside walls and attic floor—rockwool, Johns-Manville.
WINDOWS: Sash—double hung. Glass—single strength, quality A, Lustra glass, American Window Glass Co.
FLOOR COVERINGS: Main Rooms—T. & G. white pine or red oak. Kitchen and bathrooms—linoleum, Armstrong Cork Co.
WOODWORK: By Morgan Sash and Door Co.
HARDWARE: By Schlage Lock Co.
PAINTS: By National Lead Co., Samuel Cabot, Inc. and Minwax Co.
ELECTRICAL INSTALLATION: Wiring system—BX. Switches—General Electric Co.
BATHROOM EQUIPMENT: By American Radiator-Standard Sanitary Corp.
PLUMBING: Hot and cold water pipes—Streamline copper, Mueller Brass Co.
HEATING: Gas fired, filtering humidifying, American Radiator-Standard Sanitary Corp. Thermostat—Minneapolis-Honeywell Regulator Co.

TWO BEDROOMS, ONE BATH, DINING ROOM, BASEMENT



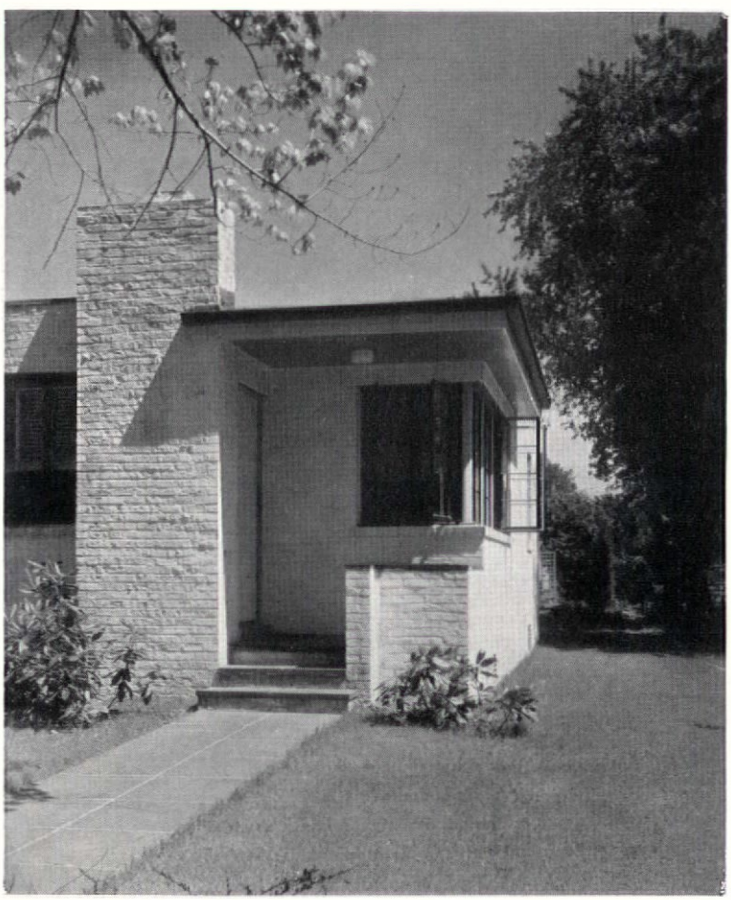
SECOND FLOOR



FIRST FLOOR

CONCORD, MASS. PERRY, SHAW & HEPBURN, ARCHITECTS, A.I.A.

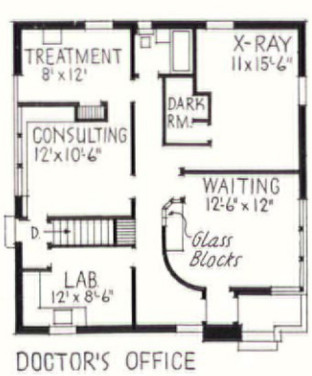
An efficient and orderly medium-cost plan illustrating a particularly good use of attic bedrooms. The five rooms are generous and well arranged, circulation direct and convenient, while the complete absence of waste space of any kind makes for minimum cost. Cubage: 17,500. Cost, including one-car garage, $6,500.



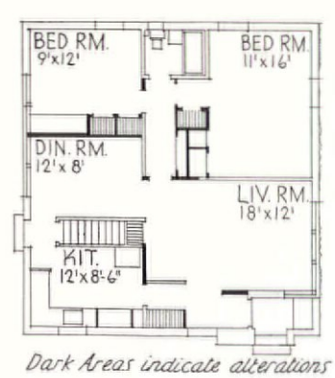
LINDEN, N. J. ANDRE HALASZ, ARCHITECT, A.I.A.
O'HARA-EDSON, ASSOCIATES

Adolph Studley Photos

The architect comments:
"Erected to accommodate the offices of a physician whose residence is next door, this house was designed so that, in case of resale, it is readily re-converted into a five-room dwelling without structural alterations. To this end, the entire finish is of dry construction, to facilitate changes." Cost: $6,500. Cubage: 19,150.



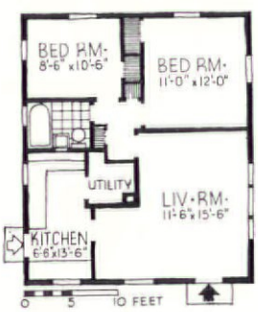
DOCTOR'S OFFICE



Dark Areas indicate alterations

TWO BEDROOMS, ONE BATH, COMBINED LIVING-DINING ROOMS

NORWALK, CONN. EVANS, MOORE & WOODBRIDGE, ARCHITECTS, A.I.A.



Two low cost houses, one with basement and one without, which are turned endwise and sidewise to the street for variety. Fundamentally, the arrangement of the rooms is the same in both cases—the bedroom ends being identical, once again showing that standardization need not necessarily mean lack of variety. Cubage, house with basement, 15,850. Cost, including detached garage, $3,950.

HOUSE IN CONCORD, MASS.

STRUCTURE: Exterior walls — frame, sheathing, 15 lb. asphalt felt, Bird & Sons, cedar clapboards; inside—pine. Interior partitions—studs, U. S. Gypsum Co. rocklath and plaster.

ROOF: Covered with hand-split cypress shingles, James Lumber Co.

SHEET METAL WORK: Flashing, gutters and leaders—copper.

INSULATION: Outside walls, attic floor and roof—wool batts, Eagle-Picher Sales Co.

WINDOWS: Sash—pine, double hung. Glass—single strength, quality B.

FLOOR COVERINGS: Main rooms—oak, Harris Mfg. Co. Kitchen and bathrooms—linoleum over fir, Armstrong Cork Co.

WOODWORK: Pine throughout. Doors—pine, Morgan Sash & Door Co.

HARDWARE: By Sargent & Co. and Stanley Works.

PAINTS: By E. I. Du Pont de Nemours & Co.

KITCHEN EQUIPMENT: Range—Glenwood Range Co. Refrigerator—Servel, Inc.

BATHROOM EQUIPMENT: By Kohler Co. Seat—C. F. Church Mfg. Co. Cabinets—Columbia Metal Box Co.

PLUMBING: Soil pipes—cast iron. Hot and cold water pipes—copper.

HEATING: Hot water pressure system, H. A. Thrush & Co. Boiler—H. W. Smith, Inc.

HOUSE IN LINDEN, N. J.

STRUCTURE: Exterior walls—brick veneer, paper, sheathing, studs; inside—aluminum foil-covered Sheetrock, U. S. Gypsum Co. Ceiling—V-jointed Celotex in 4 ft. squares, Celotex Corp.

ROOF: Covered with 5-ply built up.

SHEET METAL WORK: Flashing, gutters and leaders—Anaconda copper, American Brass Co.

INSULATION: Roof—Alfol aluminum foil between joists, Alfol Insulation Co.

WINDOWS: Sash and screens—steel, J. S. Thorn Co. Glass—double strength. Glass blocks—Pittsburgh-Corning Glass Co.

FLOOR COVERINGS: Linoleum throughout, Armstrong Cork Co.

WALL COVERINGS: Living room—Flexboard, Johns-Manville.

WOODWORK:—Doors—"Sturdibilt," M. & M. Woodworking Co.

HARDWARE: By Schlage Lock Co. and J. H. Judd & Son.

BATHROOM EQUIPMENT: By American Radiator-Standard Sanitary Corp. Cabinets—Charles Parker Co.

PLUMBING: Waste and vent pipes—galvanized steel. Hot and cold water pipes—brass.

HEATING: Direct fired conditioner, filtering and humidifying, Norge Corp. Thermostat—Minneapolis-Honeywell Regulator Co. Water heater—Whitehead Metal Co.

HOUSES IN NORWALK, CONN.

STRUCTURE: Exterior walls—T. & G. fir flush boarding and clapboards on Celotex Corp. Vaporseal sheathing. Interior—dry wall construction of gypsum wallboard, taped joints, U. S. Gypsum Co.

INSULATION: Attic floor—Kimsul, Kimberly-Clark Corp.

WINDOWS: Sash—double hung, Morgan Sash & Door Co. Glass—double strength.

WALL COVERINGS: Wallpaper throughout, Richard E. Thibaut. Bathrooms—Linowall, Armstrong Cork Co.

WOODWORK: Doors—Morgan Sash & Door Co. Garage doors—Overhead Door Co.

HARDWARE: By P. & F. Corbin Co.

PAINTS: By Benjamin Moore & Co., National Chemical & Mfg. Co., Devoe & Raynolds Co.

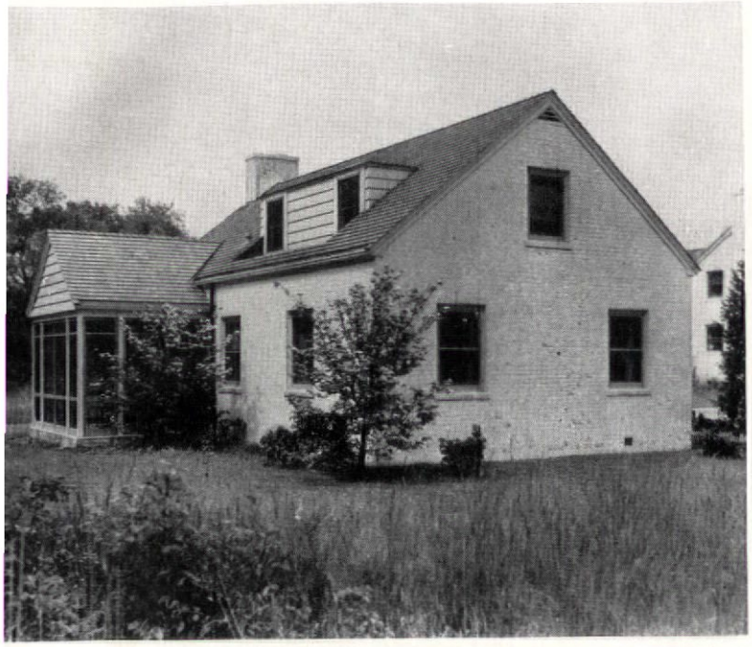
ELECTRICAL INSTALLATION: Wiring system—BX. Switches—Hart & Hegeman. Fixtures—Lightolier Co.

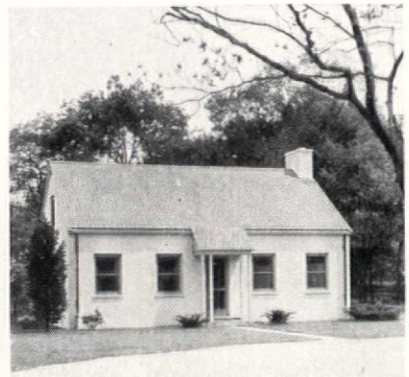
BATHROOM EQUIPMENT: By American Radiator-Standard Sanitary Corp. Cabinets—Charles Parker Co.

PLUMBING: Hot and cold water pipes—Chase Brass & Copper Co.

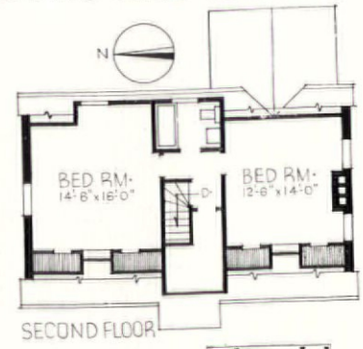
HEATING: Warm air system, filtering, humidifying, Zephyr, Home Heating Co. Grilles—Register & Grille Co. Thermostat—Minneapolis-Honeywell Regulator Co. Water heater—American Bosch Corp.

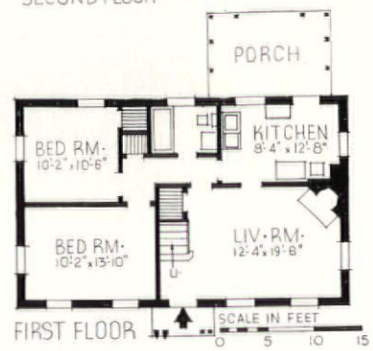
TWO BEDROOMS, BATH, PROVISION FOR TWO FUTURE BEDROOMS AND BATH





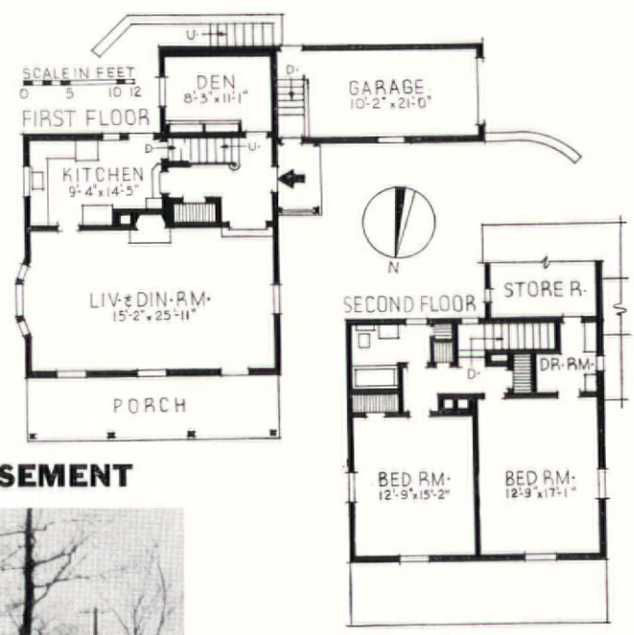
George Van Anda Photos



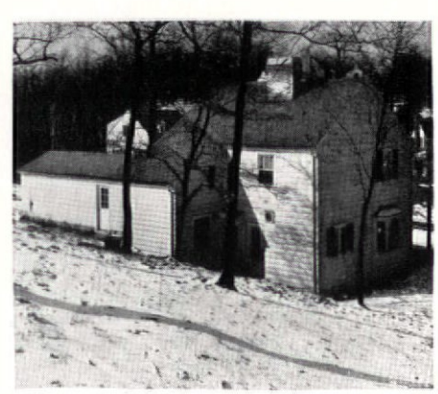


COLD SPRING HARBOR, L. I., N. Y. W. STUART THOMPSON, ARCHITECT, A.I.A.

The house above was built to meet stringent budgetary limitations. It contains two bedrooms and in plan is a variant of the standard minimum house arrangement. Space upstairs will be converted into two additional bedrooms and a bath. The example below has a garage on an intermediate level, an effective solution for a hillside lot. The den was located next to the entry so that the owner could receive business callers without interrupting the normal activities of the house. House in Cold Spring Harbor: cost, $6,100; cubage, 18,800. House in Coraopolis: cost, $10,300; cubage, 25,000.

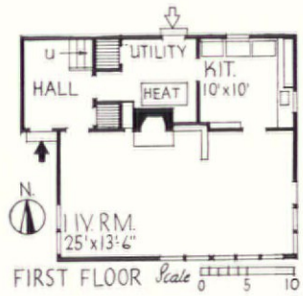


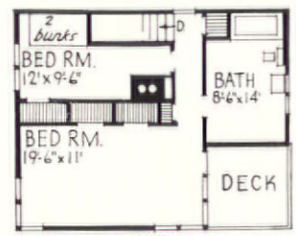
. . . STUDY-OFFICE, ATTACHED GARAGE, BASEMENT



CORAOPOLIS, PA. CHARLES M. & EDWARD STOTZ, JR., ARCHITECTS, A.I.A.

TWO BEDROOMS, BATH, UTILITY ROOM, LIVING-DINING ROOM





STONINGTON, CONN.

JOHN W. LINCOLN, DESIGNER

F. S. Lincoln Photos

Provision for the addition of a future wing has been made in the plan of this house, with access through the present front hall. The design is unusual for New England in its use of a flat slab on soil, with the conventional basement replaced by an above-ground utility room. Most interesting plan feature is the oversize bathroom, ideally adapted to the requirements of a family with very small children, and large enough for conversion into a bath-dressing room at a later date. The interior shows an agreeable combination of period furniture and a modern background. Cost: $6,500. Cubage: 15,000.

HOUSE IN COLD SPRING HARBOR, L. I., N. Y.

STRUCTURE: Exterior walls—brick veneer, Johns-Manville Steel-Tex, studs. Inside—Gold Bond Standard Insulation board for walls and ceilings, National Gypsum Co.
ROOF: Covered with shingles.
FIREPLACE: Damper—H. W. Covert Co.
SHEET METAL WORK: Flashing and leaders—copper. Gutters—fir. Ducts—galvanized wrought iron.
INSULATION: Attic floor—rockwool. Weatherstripping—Chamberlin Metal Weatherstrip Co.
WINDOWS: Sash—wood, double hung. Glass—single strength, flat drawn.
FLOOR COVERINGS: Main rooms—oak. Kitchen—linoleum. Bathrooms—tile.
WOODWORK: Cabinets—Curtis Cos.
HARDWARE: By Sargent & Co.
PAINTS: By Samuel Cabot, Inc.
ELECTRICAL INSTALLATION: Wiring system—BX. Switches—General Electric Co. Fixtures—Lightolier Co.
KITCHEN EQUIPMENT: Refrigerator—General Electric Co.
BATHROOM FIXTURES: By American Radiator-Standard Sanitary Corp.
PLUMBING: Water pipes—brass.
HEATING: Gas fired conditioner, with galvanized iron ducts and registers at ceiling, returns at floor, Bryant Heater Co. Water heater—gas.

HOUSE IN CORAOPOLIS, PA.

STRUCTURE: Exterior walls—cedar siding, Sisalkraft paper, Insulite Co. Bildrite sheathing; inside—hemlock studs, U. S. Gypsum Co. rocklath and plaster.
ROOF: Covered with slate.
FIREPLACE: Damper—Donley Bros. Mfg. Co.
SHEET METAL WORK: Flashing—16 oz. copper. Gutters—galvanized sheet metal.
INSULATION: Outside walls and attic floor—rockwool. Weatherstripping—N. S. W. Co.
WINDOWS: Sash—wood, double hung, N. S. W. Co.; basement sash, Andersen Corp. Glass—quality A, Pittsburgh Plate Glass Co.
FLOOR COVERINGS: Kitchen and bathrooms—linoleum, Congoleum-Nairn, Inc.
WOODWORK: Doors—pine, Iron City Sash & Door Co. Garage doors—McKee Door Co.
HARDWARE: By Schlage Lock Co.
PAINTS: By Pittsburgh Plate Glass Co.
ELECTRICAL INSTALLATION: Wiring system—BX. Switches—Pass & Seymour.
BATHROOM EQUIPMENT: By American Radiator-Standard Sanitary Corp. Cabinets—The F. H. Lawson Co.
PLUMBING: Soil pipes—cast iron. Hot and cold water pipes—copper tubing.
HEATING: Winter air conditioning, heating, humidifying, filtering, circulating, General Electric Co. Grilles—Auer Register Co. Water heater—The F. H. Lawson Co.

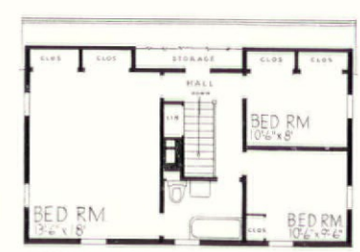
HOUSE IN STONINGTON, CONN.

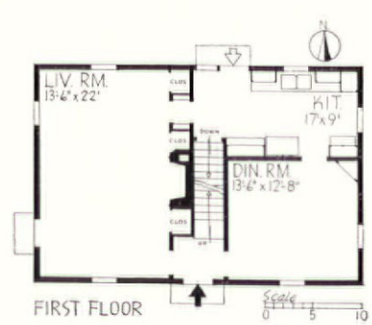
STRUCTURE: Exterior walls—red cedar bevel siding, studs, rockwool, Douglas fir plywood both sides. Floor construction—asphalt tile on concrete slab; (2nd) fir plywood.
ROOF: Covered with Anaconda copper, American Brass Co.
FIREPLACE: Bennett Fireplace Co.
SHEET METAL WORK: Ducts—Armco galvanized iron, American Rolling Mill; remainder—copper.
INSULATION: Outside walls and attic floor—rockwool, Johns-Manville.
WINDOWS: Sash—double hung, Andersen Corp.
FLOOR COVERINGS: Main floor—asphalt tile on concrete slab. Bedrooms (2nd floor)—linoleum on plywood, Armstrong Cork Co.
WOODWORK: Doors — Brockway-Smith-Haight & Lovell Co.
HARDWARE: By P. & F. Corbin Co.
ELECTRICAL INSTALLATION: Wiring system—BX. Switches—Hart & Hegeman Electric Co. Fixtures—Chase Brass & Copper Co.
KITCHEN EQUIPMENT: Range and refrigerator—Westinghouse Electric & Mfg. Co.
BATHROOM EQUIPMENT: By American Radiator-Standard Sanitary Corp.
HEATING: Warm air system, filtering and humidifying, Perfection Stove Co. Water heater—Philgas Co.

THREE BEDROOMS, ONE BATH, SEPARATE DINING ROOM, BASEMENT

Samuel H. Gottscho Photos

FAIRFIELD, CONN. CAMERON CLARK, ARCHITECT, A.I.A.





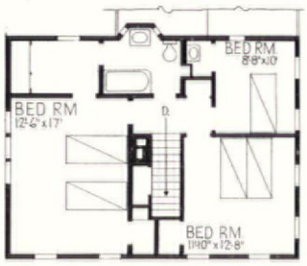
THREE BEDROOMS, ONE BATH, SERVANT'S ROOM AND BATH, ATTACHED GARAGE

Samuel H. Gottscho

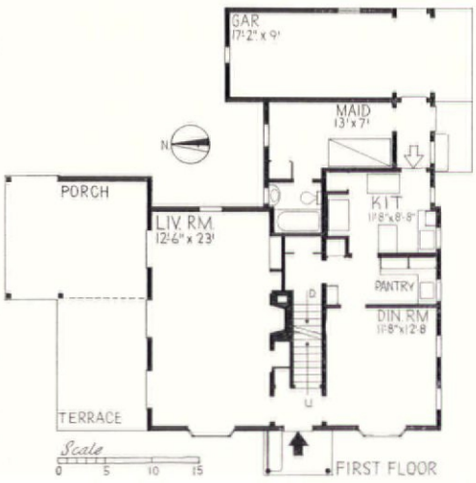
FAIRFIELD, CONN. CAMERON CLARK, ARCHITECT, A.I.A

Based on essentially the same scheme as the house on the facing page, this design by the same architect has been enlarged by the addition of a pantry, servant's room and bath, and attached garage. Despite equally competent handling, these additional rooms naturally complicate the arrangement, and make circulation somewhat more involved. An unprecedented feature of the otherwise traditional exterior is the use of shutters in conjunction with the two bay windows—a seemingly impossible feat which, so far as we know, was never accomplished by the Colonial fathers. Cubage: 25,000. Cost: $9,500.

A direct, efficient, and economical plan housed in a more or less faithful reproduction of the early Connecticut house, complete even to a fake summer beam attached to the living room ceiling. As often happens in this particular period design, the bathroom has been given a prominent position at the front of the house and a large window matching those in the flanking bedrooms. Cubage: 20,500. Cost: $7,000.



SECOND FLOOR

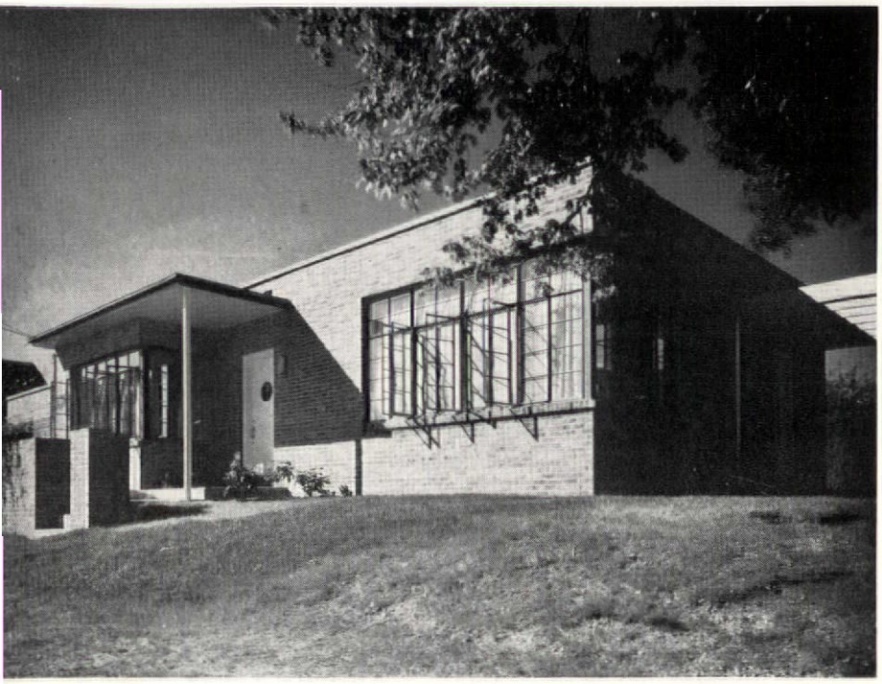


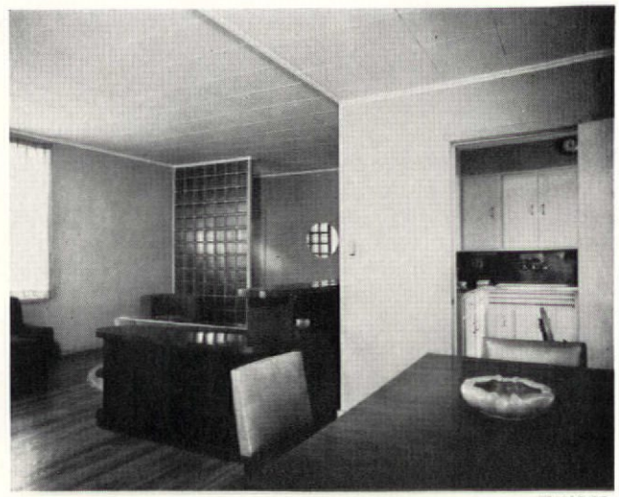
FIRST FLOOR

CONSTRUCTION OUTLINE

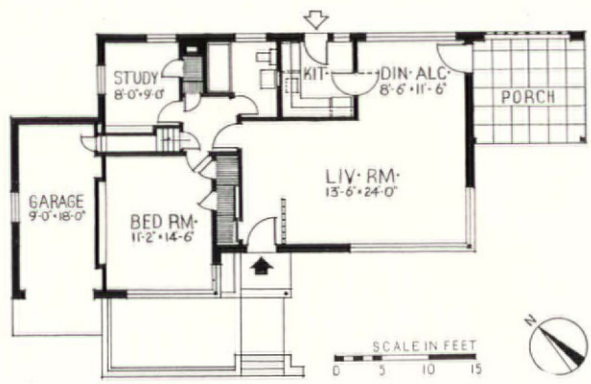
STRUCTURE: Exterior walls—clapboards, Sisalkraft Co. paper, sheathing, studs; inside—rocklath and plaster.
INSULATION: Outside walls and attic floor—rockwool, Ludowici-Celadon Co. Weatherstripping — Kane Mfg. Co. Sound insulation—Balsam wool, Wood Conversion Co.
WINDOWS: Sash—double hung, Curtis Cos. Glass—single strength, quality B.
FLOOR COVERINGS: Main rooms—red oak. Kitchen—linoleum, Armstrong Cork Co. Bathrooms—rubber tile, Armstrong Cork Co.
ELECTRICAL INSTALLATION: Wiring system—3 and 2 wire, 3 phase. Switches—Arrow, Hart & Hegeman Electric Co.
KITCHEN EQUIPMENT: Range and refrigerator—electric. Cabinets—Curtis Cos.
BATHROOM EQUIPMENT: By American Radiator-Standard Sanitary Corp. Cabinets—Hoegger, Inc.
HEATING AND AIR CONDITIONING: Split system including air conditioning. Boiler and radiators—American Radiator-Standard Sanitary Corp. Grilles—Tuttle & Bailey, Inc. Regulator—Minneapolis-Honeywell Regulator Co. Water heater—Taco Heaters, Inc.

TWO BEDROOMS, BATH, DINING ALCOVE, ATTACHED GARAGE, BASEMENT





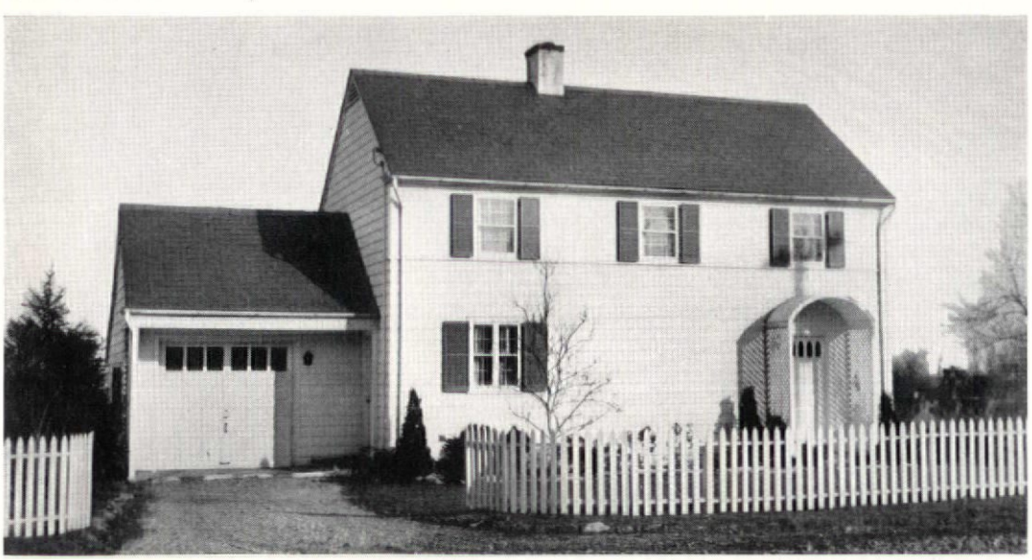
Westfield



LINDEN, N. J. HARRY MASLOW, ARCHITECT, A. I. A.

While there is a decided difference in the means of expression employed by the architects of these two houses, there is very little choice between the plans. Both are very well worked out, thoroughly livable, and exceedingly compact. These qualities are especially noticeable in the two-story design. The stair in this house is as economical and convenient as in any plan produced to accommodate two upstairs bedrooms. House in Linden: cost, $6,200; cubage, 20,300. House in Yonkers: cost, $7,600; cubage, 24,200.

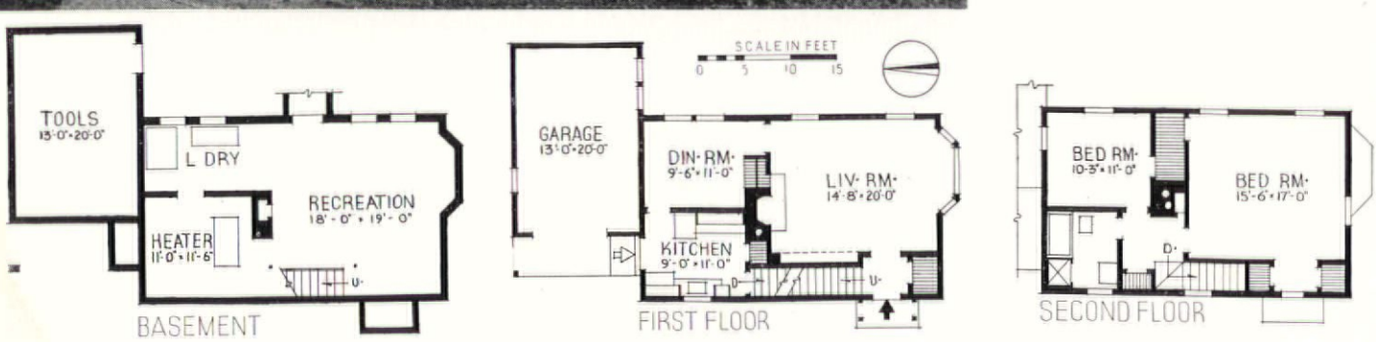
TWO STORIES, SEPARATE DINING ROOM



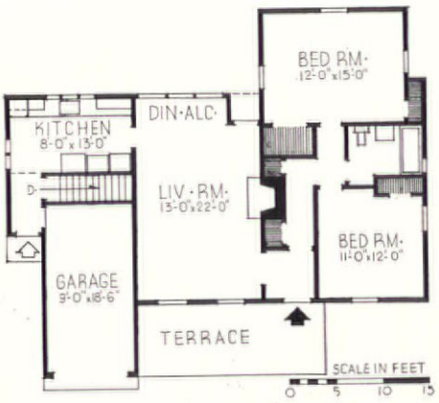
YONKERS, N. Y.

RICHARD G. BELCHER

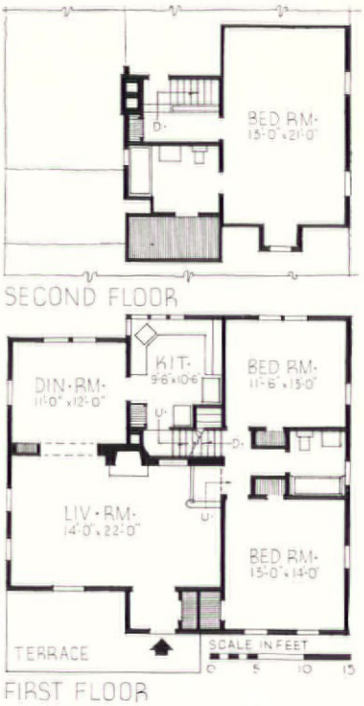
ARCHITECT



TWO BEDROOMS, ONE BATH—THREE BEDROOMS, TWO BATHS, BASEMENT GARAGE



COST: $7,200. CUBAGE: 17,800.



COST: $8,500. CUBAGE: 24,000.

MAMARONECK, N. Y. CHARLES F. MINK, ARCHITECT

Two carefully detailed adaptations of period designs. The one-story house has an excellent solution in the separation of circulation from the front door to the various rooms. The example below is very generous in its allocation of space and has bedrooms placed somewhat above the level of the other rooms in order to accommodate a garage below.

HOUSE IN LINDEN, N. J.

STRUCTURE: Brick veneer, Sayre & Fisher, diagonal sheathing; inside—studs, plaster board and plaster, U. S. Gypsum Co.
ROOF: Covered with 4-ply built-up, Johns-Manville.
WINDOWS: Sash—Fenestra, Detroit Steel Products Co. Glass—plate and double strength, Libbey-Owens-Ford Glass Co. Glass blocks—Owens-Illinois Glass Co.
FLOOR COVERINGS: Main rooms—clear red oak. Halls, kitchen and bathrooms—linoleum, Congoleum-Nairn Co.
KITCHEN EQUIPMENT: Range — Magic Chef, American Stove Co. Refrigerator—General Electric Co.
BATHROOM EQUIPMENT: By Crane Co. Cabinets—Miami Cabinet Div., The Philip Carey Co.
PLUMBING: Water pipes—brass, Bridgeport Brass Co.
HEATING: Warm air system, filtering and humidifying. Boiler—Lennox Furnace Co. Thermostat—Minneapolis-Honeywell Regulator Co.

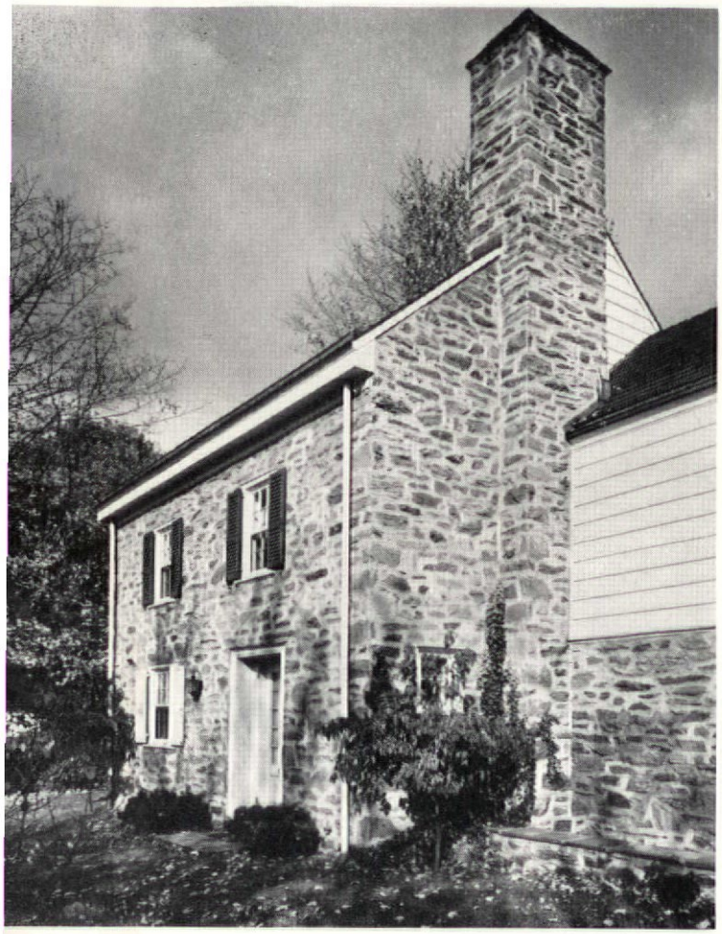
HOUSE IN YONKERS, N. Y.

STRUCTURE: Exterior walls—wood shingles, studs, Gimco rockwool, General Insulating Co.; inside—U. S. Gypsum Co. plaster board and plaster.
ROOF: Covered with Pennsylvania slate.
WINDOWS: Sash—wood, double hung, Curtis Cos.; basement—steel sash, Vento Steel Sash Co. Glass—Pittsburgh Plate Glass Co.
FLOOR COVERINGS: Kitchen—linoleum, Armstrong Cork Co. Bathrooms—tile, American-Franklin-Olean Tile Co.
KITCHEN EQUIPMENT: Range — Dixon Mfg. Co. Refrigerator—Frigidaire Corp. Cabinets—Oxford Cabinet Co.
BATHROOM EQUIPMENT: By American Radiator-Standard Sanitary Corp. Cabinets—Hallensheid & McDonald.
PLUMBING: Hot and cold water pipes—Anaconda copper, American Brass Co.
HEATING: Warm air system, filtering and humidifying, Fox Furnace Co., Div. of American Radiator Co. Thermostat—Minneapolis-Honeywell Regulator Co. Water heater—Whitehead Metal Co.

HOUSES IN MAMARONECK, N. Y.

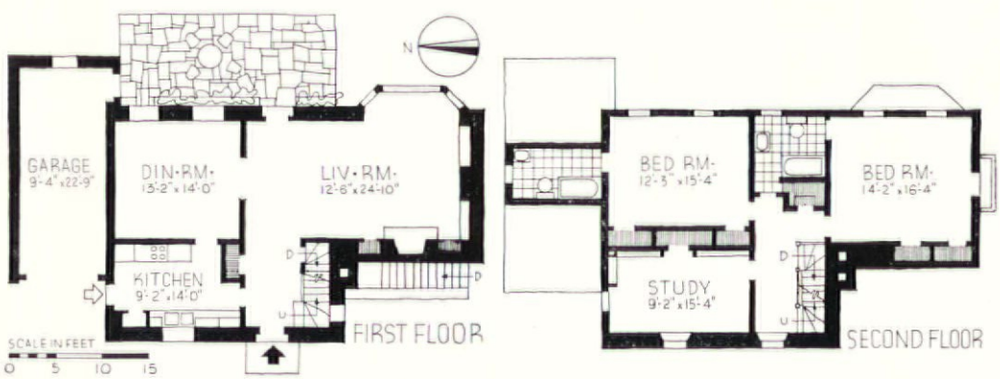
STRUCTURE: Exterior walls—studs, wood sheathing, shingles, 2 in. rockwool; interior—studs and U. S. Gypsum Co. Sheetrock.
ROOF: Covered with red cedar shingles.
SHEET METAL WORK: Flashing and leaders—copper. Gutters—wood.
WOODWORK: White pine throughout.
ELECTRICAL INSTALLATION: Wiring system—BX.
BATHROOM EQUIPMENT: By American Radiator-Standard Sanitary Corp.
PLUMBING: Hot and cold water pipes—brass.
HEATING: Steam system. Boiler, valves and water heater — American Radiator-Standard Sanitary Corp.

THREE BEDROOMS, TWO BATHS, STUDY-BEDROOM, ATTACHED GARAGE, BASEMENT



C. V. D. Hubbard Photos

WALLINGFORD, PA. W. POPE BARNEY, ARCHITECT, A. I. A., ROY W. BANWELL, ASSOCIATE

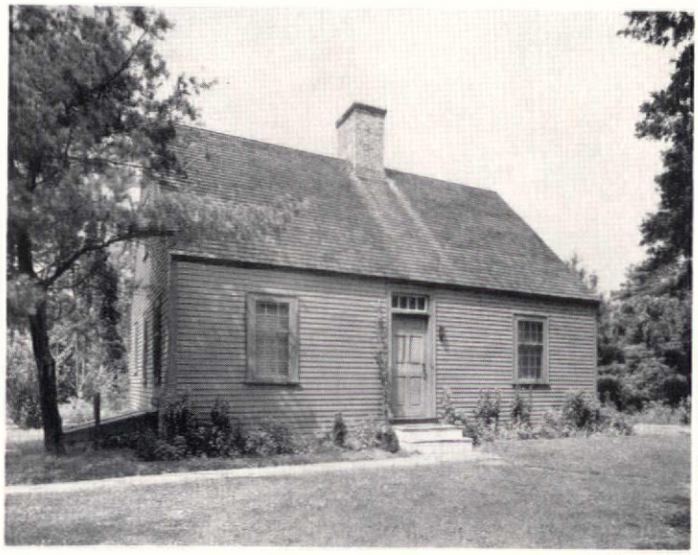


The plan of this house shows some very pleasant features, notably the large, irregularly shaped living room, the free opening between this room and the hall, the direct view from the entrance to the rear garden, and the convenient proximity of the kitchen to the front door. Also of interest is the fact that the rear of the house has been studied as carefully as the front, a practice which, unfortunately, is not too common. Cost: $12,420. Cubage: 35,000.

CONSTRUCTION OUTLINE

STRUCTURE: Exterior walls—local stone and clapboards, sheathing; inside—wallboard and plaster.
ROOF: Covered with wood shingles.
FIREPLACE: Damper—H. W. Covert Co.
SHEET METAL WORK: Flashing—copper lead. Gutters—tin. Leaders and ducts—galvanized iron.
INSULATION: Attic floor—Red Top, Johns-Manville. Weatherstripping — Chamberlin Metal Weatherstrip Co.
WINDOWS: Sash—double hung, wood. Glass—double strength, quality A, Pittsburgh Plate Glass Co.
FLOOR COVERINGS: Main rooms—oak. Kitchen and bathrooms—linoleum, Armstrong Cork Co.
HARDWARE: By Sargent & Co.
PAINTS: By E. I. Du Pont de Nemours Co. and National Lead Co.
ELECTRICAL INSTALLATION: Wiring system—conduit. Switches—Trumbull Electric Co.
KITCHEN EQUIPMENT: Range and refrigerator—General Electric Co. Sinks—Hajoca Co.
BATHROOM EQUIPMENT: By Hajoca Co.
HEATING: Warm air system. Boiler—H. B. Smith, Inc. Thermostat—Minneapolis-Honeywell Regulator Co. Water heater—Philadelphia Electric Mfg. Co.

TWO BEDROOMS, BATH, STUDY, DETACHED GARAGE, FULL BASEMENT



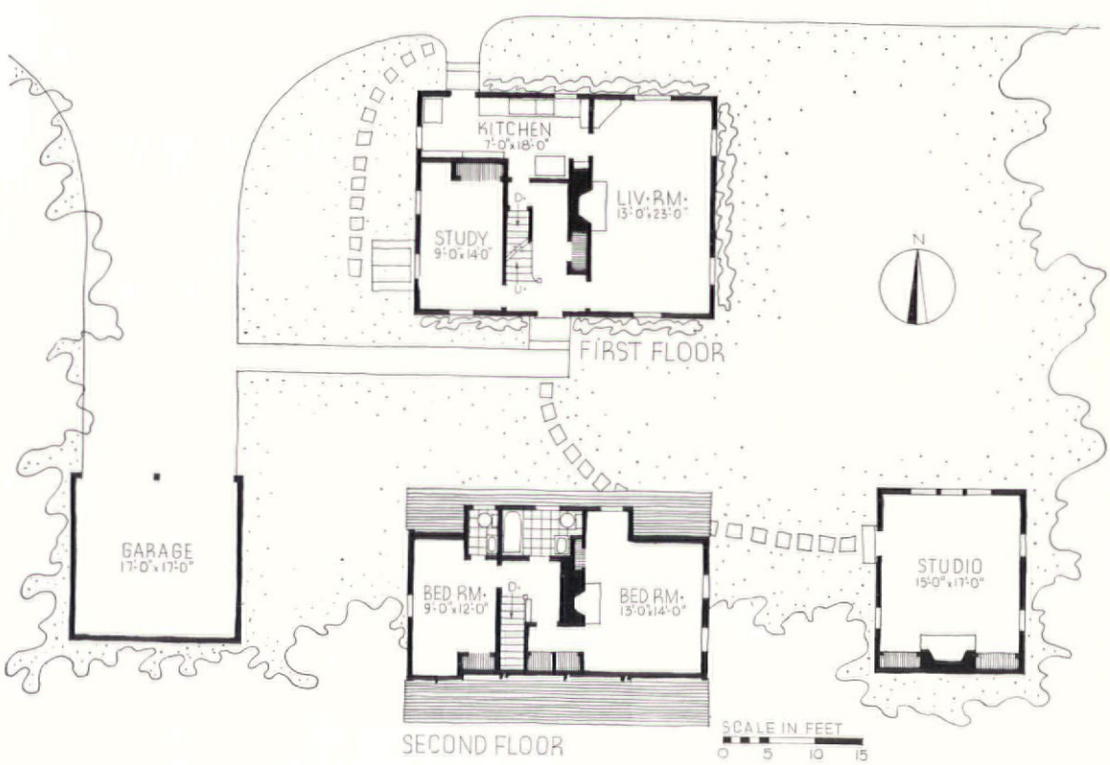
Paul J. Weber

Cushman-Gellatly

Cushman-Gellatly

CANTON, MASS.
GORDON ALLEN, ARCHITECT, A. I. A.

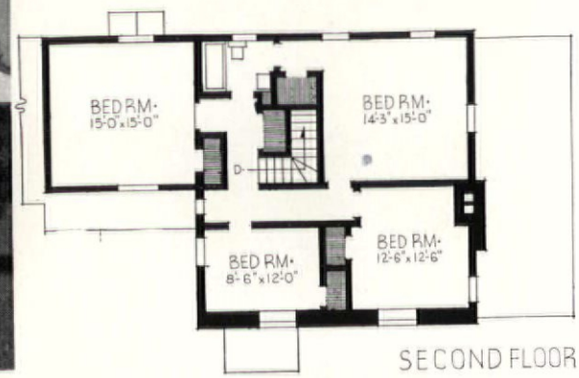
The architect comments: "This little house was intended as a retreat in the country for a writer, a painter and their son. It was built and equipped with an eye to economy and low maintenance. It has good but simple plumbing, plain, unstained wood trim, and plain plaster walls that are neither painted nor papered. Location of the house was predetermined by the placing of a studio which required a maximum of north light." Cost: (including garage and studio) $8,600. Cubage: house, 18,000; total 25,080.



CONSTRUCTION OUTLINE

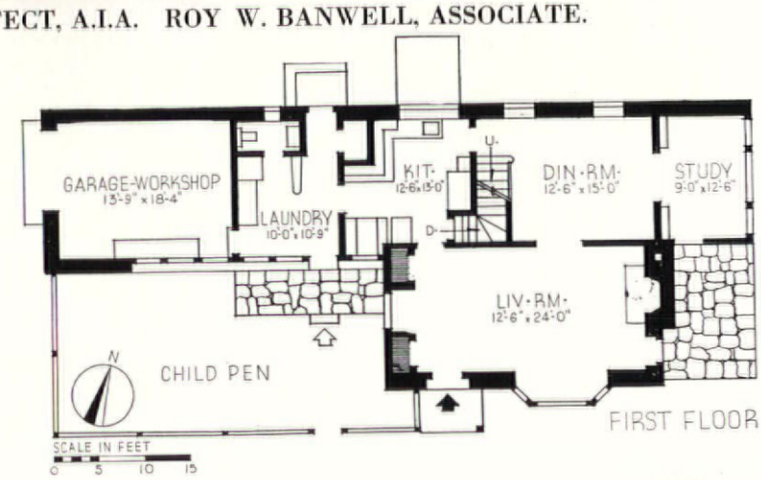
STRUCTURE: Exterior walls—studs covered with Doubleseal, Masonite Corp., and red cedar clapboards; inside—Masonite Corp. lath and gypsum plaster.
ROOF: Covered with red cedar shingles.
SHEET METAL WORK: Flashing—16 oz. copper.
INSULATION: Attic floor—mineral wool, U. S. Gypsum Co. Weatherstripping—Burrows Mfg. Co.
WINDOWS: Sash—double hung, pine. Glass—quality A, double strength.
HARDWARE—By Russell & Erwin Mfg. Co.
KITCHEN EQUIPMENT: Range and refrigerator—Westinghouse Electric & Mfg. Co.
BATHROOM EQUIPMENT: Toilet—W. A. Case & Son Mfg. Co.; remainder—Kohler Co.
PLUMBING: Soil pipes—cast iron, Central Iron Foundry Co. Hot and cold water—copper, Mueller Brass Co.
HEATING: Forced warm air system, humidification. Grilles—Tuttle & Bailey, Inc. Thermostat—Minneapolis-Honeywell Regulator Co. Water heater—Hot Point, Edison General Electric Appliances, Inc.

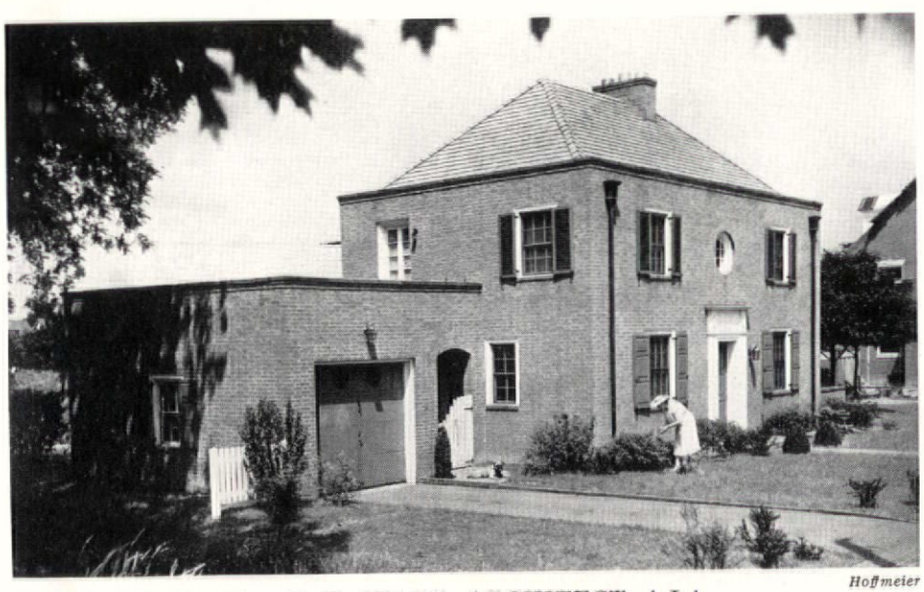
THREE BEDROOMS, ONE BATH, LAVATORY, DINING ROOM, LAUNDRY, GARAGE



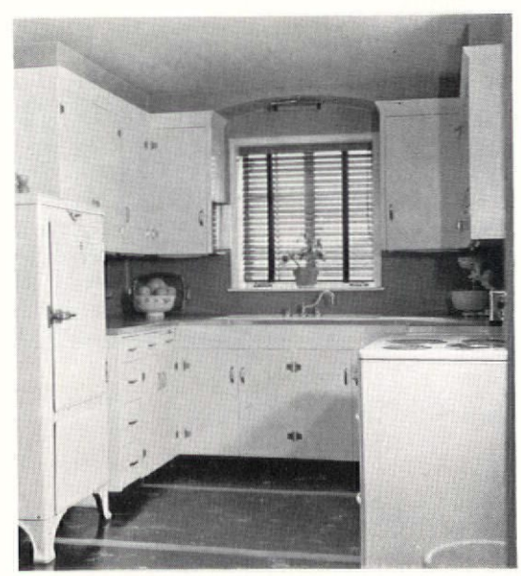
NEWTOWN SQUARE, PA. W. POPE BARNEY, ARCHITECT, A.I.A. ROY W. BANWELL, ASSOCIATE.

Offering almost exactly the same facilities, these two houses differ fundamentally both as to plan and exterior treatment. The upper house, in the true spirit of the Pennsylvania farmhouse, is spreading and informal. Its basementless plan provides a laundry on the ground floor level, locates the stair so that it rises from a corner of the dining room—an unorthodox, but undoubtedly convenient arrangement. The plan of the Georgian house below is compact and highly efficient. There is no comparing the relative virtues of these two approaches, since they represent a totally different attitude toward what a house is expected to accomplish, but the contrast offers a prime argument for individualized design to meet varying desires. Upper house, 38,000 cu. ft., cost $14,580; lower house 24,000 cu. ft., cost $8,200.

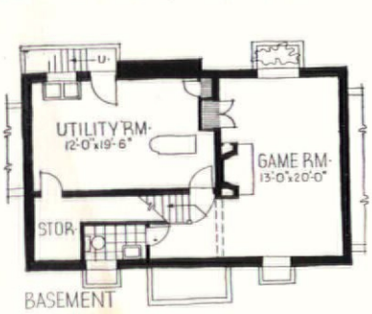


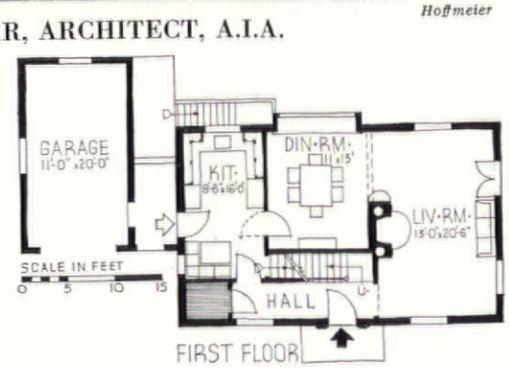


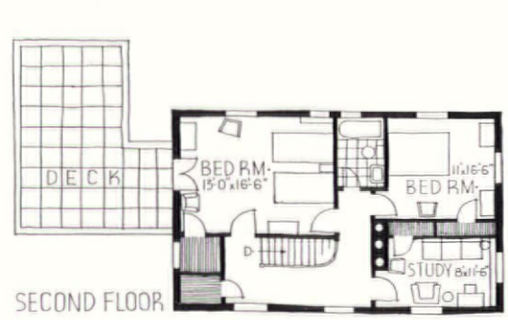
Hofmeier



HARRISBURG, PA., B. E. STARR, ARCHITECT, A.I.A.



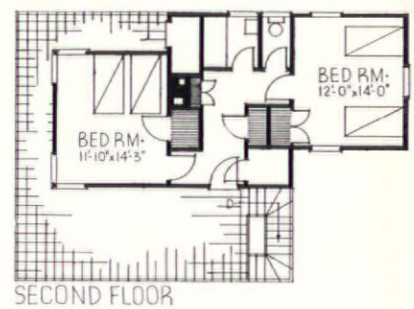


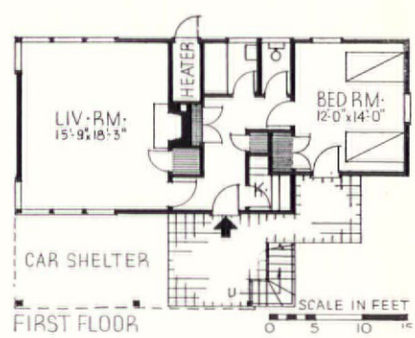


GUEST HOUSE—THREE BEDROOMS, 2 BATHS, KITCHENETTE, NO BASEMENT

Richard Garrison

STURBRIDGE, MASS. GEDDES AND KELLY, ARCHITECTS, A. I. A.





Because of its special function as an adjunct to a larger, and completely equipped dwelling, the plan of this guest house is not adapted to general purposes, but the straightforward design approach is decidedly so. Both economical and attractive, the exterior treatment of natural-finish flush boards and the simple, spacious deck and car shelter seem eminently suited to the more-frequently encountered small house problem, and have been exceedingly well handled. The fenestration of the living room, however, is open to question, especially the corner window overlooking the carport, which would seem to be out of place if this space is often used as a storage space for cars. Cost: $3,000. Cubage: 13,500.

HOUSE IN NEWTOWN SQUARE, PA.

STRUCTURE: Exterior walls—local stone, sheathing; inside—wallboard and plaster.
ROOF: Covered with wood shingles.
SHEET METAL WORK: Flashing—copper lead. Gutters—tin. Leaders and ducts—galvanized iron.
INSULATION: Attic floor—Red Top, Johns-Manville. Weatherstripping — Chamberlin Metal Weatherstrip Co.
WINDOWS: Sash—double hung, wood. Glass—double thick, quality A, Pittsburgh Plate Glass Co.
FLOOR COVERINGS: Main rooms—oak. Kitchen—linoleum, Armstrong Cork Co.
KITCHEN EQUIPMENT: Range and refrigerator—General Electric Co.
BATHROOM EQUIPMENT: By Hajoca Co. Cabinets—Steel & Wike.
HEATING: Warm air system. Boiler— H. B. Smith, Inc. Thermostat—Minneapolis-Honeywell Regulator Co. Water heater—Philadelphia Electric & Mfg. Co.

HOUSE IN HARRISBURG, PA.

STRUCTURE: Exterior walls—Glen-Gery solid brick, Pennsylvania Supply and Glen-Gery Shale Brick Corp.; inside—shiplap, U. S. Gypsum Co. Fiber-Glas insulation and Weatherwood decorative board.
FIREPLACE—Bennett Fireplace Co.
WINDOWS: Sash—double hung, steel, Truscon Steel Co. Glass blocks—Pittsburgh-Corning Corp.
WALL COVERINGS: Weatherwood decorative board throughout, U. S. Gypsum Co. Bathrooms—Carrara glass, Pittsburgh Plate Glass Co.
KITCHEN EQUIPMENT: Range—Geo. D. Roper Corp.
BATHROOM EQUIPMENT: Elger Mfg. Co.
PLUMBING: Soil pipes—American Radiator-Standard Sanitary Corp. Hot and cold water pipes—brass, Mueller Brass Co.
HEATING: Hot water system, Bell-Gossett. Water heaters, radiators and convectors—National Radiator Corp.

HOUSE IN STURBRIDGE, MASS.

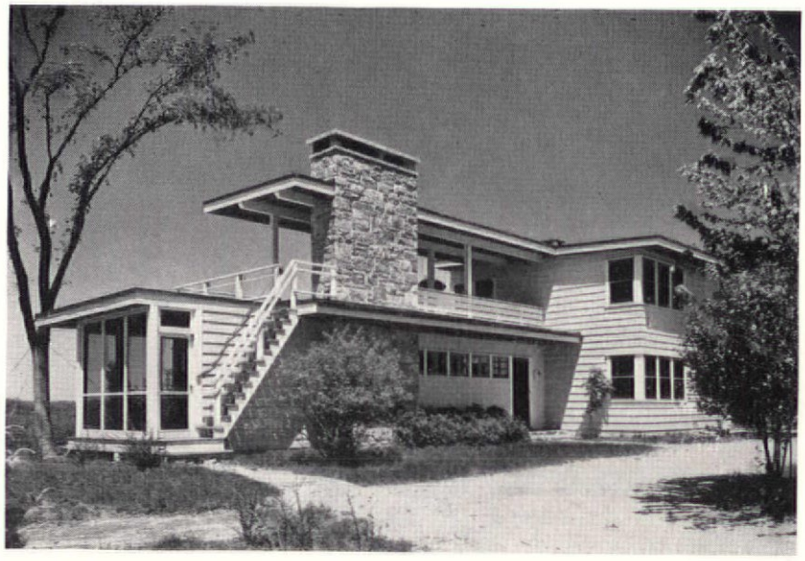
STRUCTURE: Exterior walls—pine sheathing, fir studs; inside—pine sheathing.
ROOF: Covered with 4-ply tar and gravel. Deck—covered with canvas.
FIREPLACE: Damper—H. W. Covert Co.
INSULATION: Ceiling (2nd floor)—rockwool, Eagle-Picher Sales Co.
WINDOWS: Sash—wood casement, Andersen Corp. Glass—single strength, quality A.
FLOOR COVERINGS: Main rooms—pine. Bathrooms—linoleum, Armstrong Cork Co.
HARDWARE: By P. & F. Corbin.
PAINTS: By Samuel Cabot, Inc.
ELECTRICAL INSTALLATION: Wiring system—BX.
KITCHEN EQUIPMENT: Refrigerator — General Electric Co. Cabinets—pine.
BATHROOM EQUIPMENT: By Kohler Co.
PLUMBING: Soil pipes—cast iron. Hot and cold water pipes—red brass.
HEATING: Kerosene heater with coil for hot water; 30 gallon water storage tank.

THREE BEDROOMS, TWO BATHS, ROOF DECK

All photos, Samuel H. Gottscho

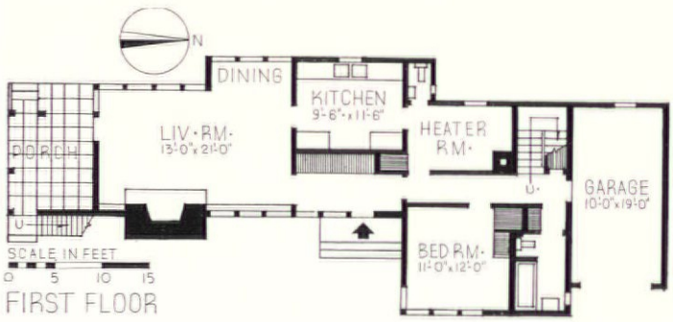
The use of an exposed stud framework for vacation houses is a widespread U. S. building tradition. In the hands of competent architects and builders the technique is not only structurally adequate but capable of producing interiors thoroughly pleasing and appropriate in character. Accenting the special uses of the house is the second-floor deck, open on both sides and sheltered by a cantilevered roof. A similarly open quality is apparent in the main living areas. Particularly successful as an example of fixed sash is the large window in the living room. The plan provides ample living and dining space and small but adequate bedrooms. Cost: $9,000. Cubage: 20,930.

POUNDRIDGE, N. Y. MOORE & HUTCHINS, ARCHITECTS, A.I.A.

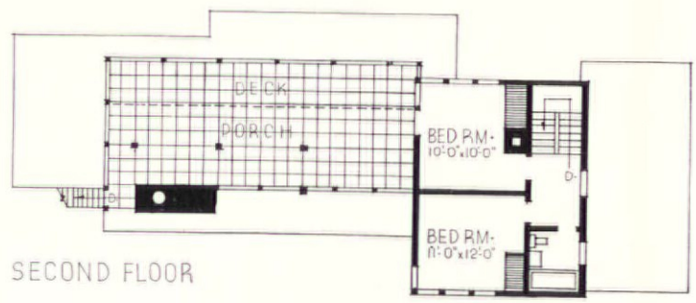


CONSTRUCTION OUTLINE

STRUCTURE: Exterior walls—red cedar siding, Neponsit tar paper, Bird & Son, T. & G. fir sheathing, studs left exposed on inside.
ROOF: Covered with tar and gravel, Celotex Corp.
FIREPLACE: Damper—H. W. Covert Co.
INSULATION: Roof—Celotex Corp. Weatherstripping—Unique Window Balances, Inc.
WINDOWS: Sash—double hung and pine casements. Glass—single strength, quality A, Libbey-Owens-Ford Glass Co.
WOODWORK: Cabinets—white pine. Doors—Curtis Cos.
PAINTS: By Samuel Cabot, Inc. and Minwax Co.
ELECTRICAL INSTALLATION: Wiring system—BX. Switches—Pass & Seymour and General Electric Co.
KITCHEN EQUIPMENT: Range—Philgas Co.
BATHROOM EQUIPMENT: By American Radiator-Standard Sanitary Corp. Cabinets—United Metal Box Co.
HEATING: Warm air system, winter conditioning, Thatcher Furnace Co. Thermostat—Minneapolis-Honeywell Regulator Co. Water heater—Philgas Co.

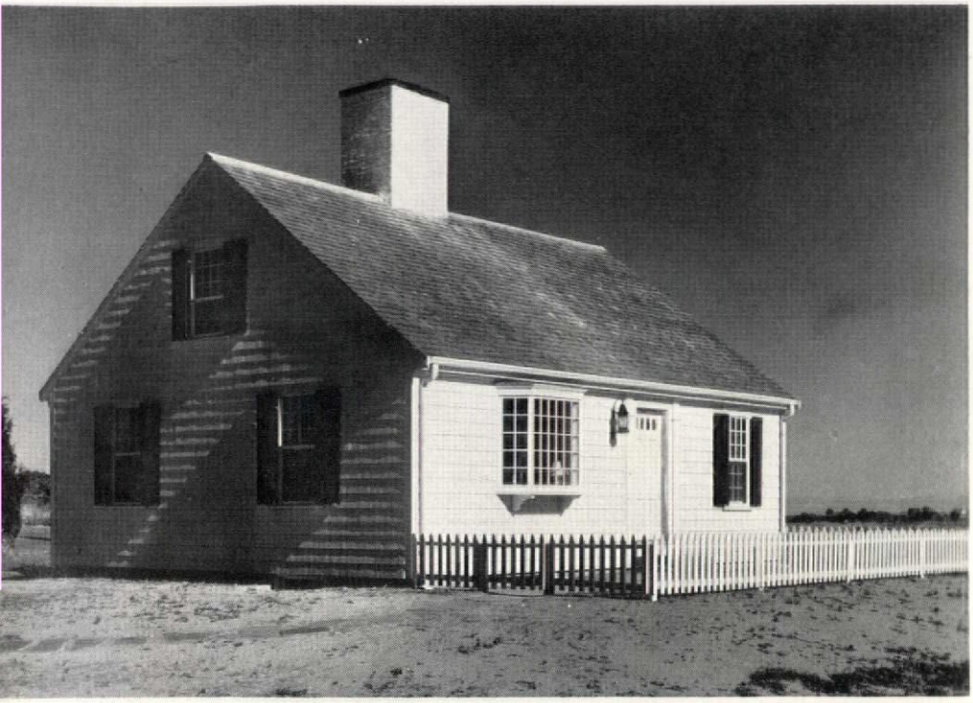


FIRST FLOOR



SECOND FLOOR

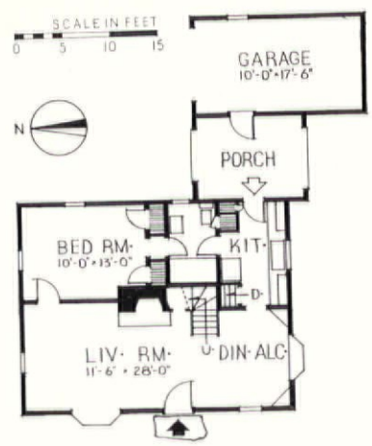
ONE BEDROOM, BATH, FULL BASEMENT, ATTACHED GARAGE



Haskell

IPSWICH, MASS.
ROYAL BARRY WILLS
ARCHITECT

It would be difficult to find a more economical solution for a set of minimum requirements. There is no corridor space, no entrance hall, there are no expensive jogs in the main walls of the house and all plumbing is concentrated in one corner. Direct access from kitchen to bath is an excellent feature. The exterior and interiors show a very scholarly handling of Colonial motives. Cost: $3,900. Cubage: 14,500.



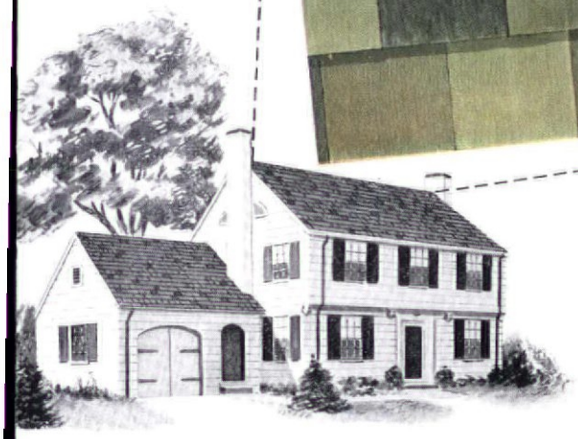
CONSTRUCTION OUTLINE

STRUCTURE: Exterior walls—frame, red cedar shingles; inside—U. S. Gypsum Co. rock lath and plaster, white pine finish.
ROOF: Covered with white cedar shingles.
FIREPLACE: Damper—H. W. Covert Co.
SHEET METAL WORK: Flashing—lead and zinc. Leaders—Toncan metal, Republic Steel Corp.
INSULATION: Outside walls and attic floor —Sterling building blanket.
WINDOWS: Sash—pine. Glass—quality B.
FLOOR COVERINGS: Living room—pegged oak plank. Bedrooms and halls—plain oak. Kitchen and bathrooms—linoleum, Armstrong Cork Co.
WOODWORK: Trim—pine. Doors—6-panel fir and white pine to detail.
HARDWARE: By P. & F. Corbin.
ELECTRICAL INSTALLATION: Wiring system—BX. Switches—Hart & Hegeman. Fixtures—Georgian Bronze Co.
KITCHEN EQUIPMENT: Range—electric. Refrigerator—Frigidaire Corp.
BATHROOM EQUIPMENT: All fixtures by Kohler Co.
PLUMBING: Hot and cold water pipes—red brass, Chase Brass & Copper Co.
HEATING: Oil burning steam system, American Radiator-Standard Sanitary Corp. Thermostat — Minneapolis-Honeywell Regulator Co. Water heater—Taco Heaters, Inc.

K&M "Century"

Color-Toning

...NOW BRINGS ASBESTOS-CEMENT ROOFING SHINGLES TO NEW HEIGHTS OF BEAUTY



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OLIVE GREEN

DELL GREEN

OXFORD BLACK

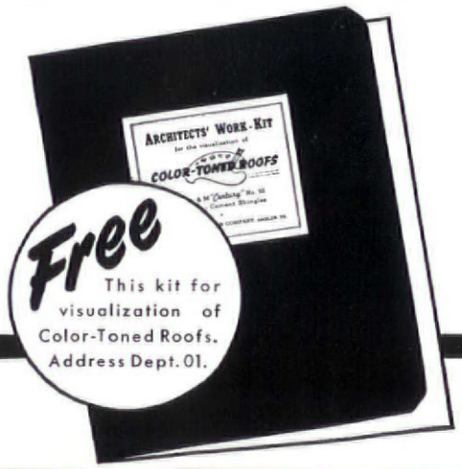
RUST

ROYAL RED

SUNSET RED

HEATHER

LEAF TAN



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COMPANY, AMBLER, PENNSYLVANIA

K&M best in asbestos

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and the Board saves money on them, too!"

JANITORS DELIGHT *at easily cleaned floors like this one of Armstrong's Asphalt Tile in Hutchinson Junior College, Hutchinson, Kansas. This floor was easily installed by hand, a block at a time. Architects: McCrackin & Hiett; Contractor: M. C. Foy & Son; floor laid by Wiley Dry Goods Co.*

EASY is hardly the word. *It's a cinch* to clean floors of Armstrong's Asphalt Tile. Just sweep daily, wash and wax every now and then—that's all.

The savings of an Armstrong's Asphalt Tile floor begin on the date of purchase. Low initial cost is the first saving. Low cost of upkeep saves you money each week. And, savings mount as years go by because this asphalt tile won't show its age.

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The rich plain and marble colors are scuff-proof . . . run right through the material. Costly refinishing isn't needed.

Furthermore, Armstrong's Asphalt Tile is resistant to moisture and the alkalis present in basement floors. Thus, it is safe to use over concrete in direct contact with the ground—either on or below grade.

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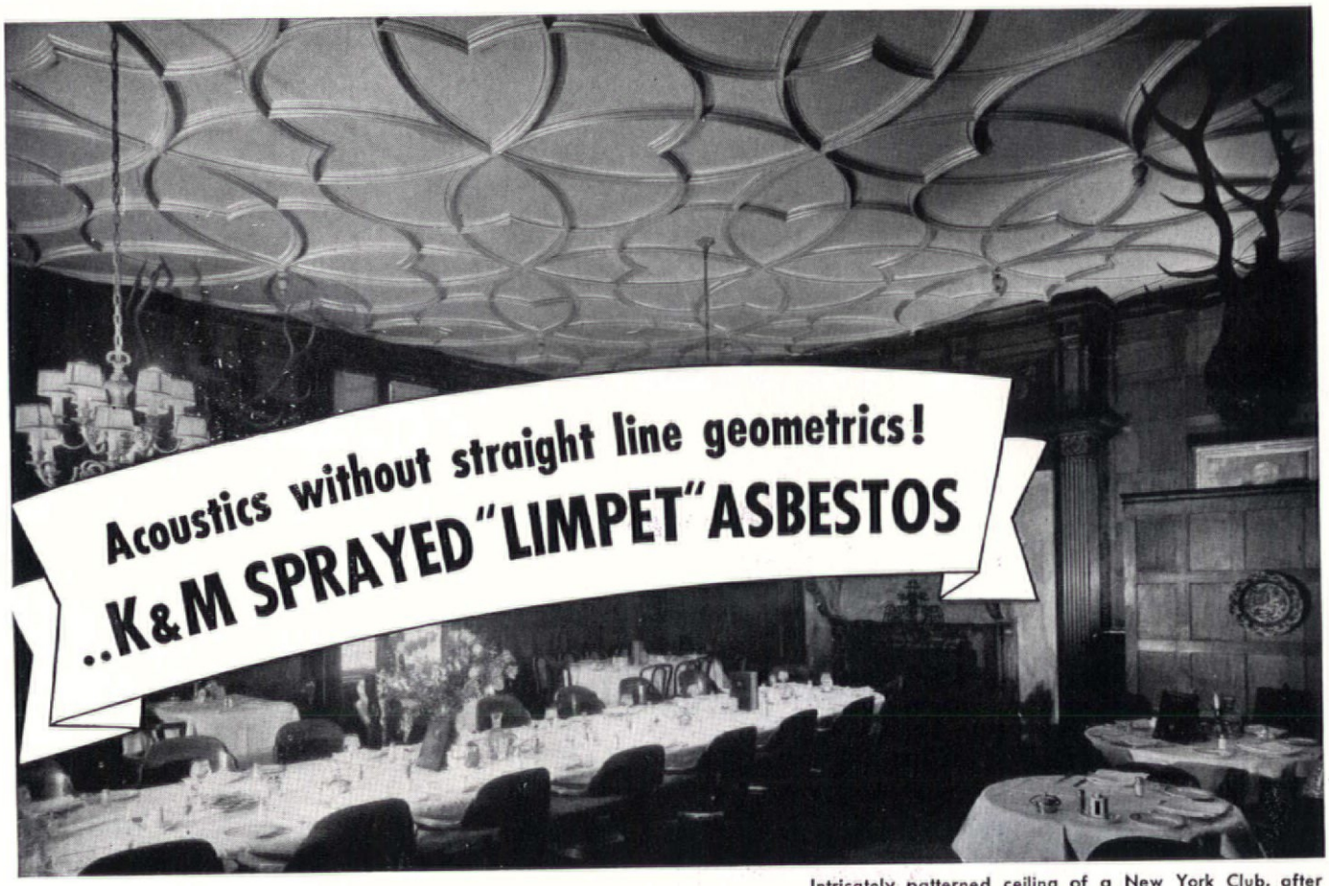

Intricately patterned ceiling of a New York Club, after acoustical treatment with K&M Sprayed "Limpet" Asbestos. McKim, Mead and White—Architects.

Keasbey & Mattison Sprayed "Limpet" Asbestos is a modern acoustical material that is as architecturally adaptable as plaster. It faithfully follows the contours of curved, recessed or irregular surfaces, and is applied almost as easily as paint itself. It creates no unwanted geometrical patterns.

No clearer illustration could be found than the ceiling of this dining room in a N.Y. Club. K&M Sprayed "Limpet" was readily applied, providing the desired acoustical effect without intruding in the slightest degree on the intricate pattern of the ceiling. This is but one example of the way K&M Sprayed "Limpet" unties your hands. It may even be painted over and over again without impairing its acoustical value.

Sprayed from a "gun," "Limpet" sticks tight to any clean surface, regardless of shape or composition without the need of mechanical systems or gadgets. Applied 1" thick on solid backing, it has a noise reduction coefficient of .70. Because of its method of application it may be built up to any practical thickness to provide the specified degree of sound absorption per square foot. Thus it is completely flexible architecturally and acoustically as well.

"Limpet" is fire-resisting, moisture-resisting and vermin-proof. It is extremely light in weight, and has the great additional advantage of being an excellent heat insulator, with a thermal conductivity of only .31 at 75°F.

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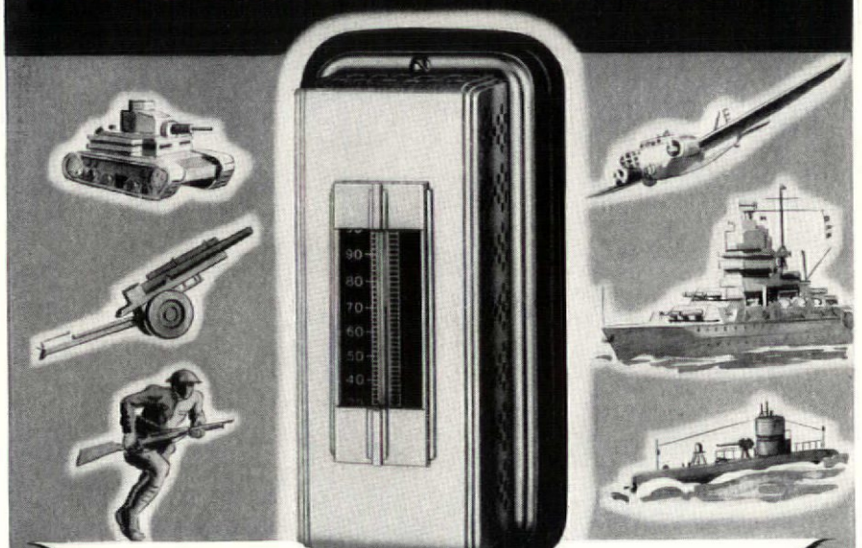
MUST BE BUILT UNDER
PRECISE TEMPERATURE CONDITIONS



HERE'S HOW JOHNSON AIDS PRODUCTION

Automatic temperature control equipment is an important consideration when "machining up" for defense orders. When JOHNSON is called upon to furnish and install such apparatus, there's no delay. The entire problem is solved by Johnson men, from preliminary engineering recommendations down through manufacturing and installing the equipment required for proper automatic temperature and humidity control. There is no division of responsibility. It rests entirely in the hands of the nation-wide Johnson organization.

Johnson engineers have intimate knowledge of many manufacturing processes. For example, ask them about International Standards for the temperature of rooms in which metal parts for precision machinery are measured. Special problems like that are the regular order of business for Johnson technicians and sales engineers. Ask to have one of them call or send for descriptive bulletins. No obligation, of course.

A FEW OF MANY JOHNSON INSTALLATIONS WHICH TIE IN WITH NATIONAL DEFENSE WORK

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Hamilton Standard Propellers Div. of United Aircraft Corp., East Hartford, Conn.
Pratt & Whitney Aircraft Div. of United Aircraft Corp., East Hartford, Conn.
Grumman Aircraft Engineering Co., Bethpage, N. Y.
Picatinny Arsenal, U. S. War Dept., Dover, N. J.
Wright Aeronautical Corp. (motor packing & shipping bldg.), Paterson, N. J.
Eclipse Machine Div., Bendix Aviation Corp., Elmira, N. Y.
Ohio Crankshaft Co., Cleveland, O.
Ford Motor Co., Aircraft Bldg., Rouge Plant, Dearborn, Mich.
Kearney & Trecker Corp. (machine tools), Milwaukee, Wis.
Kelsey-Hayes Wheel Corp., Plymouth, Mich.
E. I. du Pont, de Nemours & Co., Indiana Ordnance Works, Charlestown, Ind.
E. I. du Pont, de Nemours & Co., Millington, Tenn.
North American Aviation, Inc., Dallas, Tex.
Naval Air Station, U. S. Navy Dept., Alameda, Calif.
Consolidated Aircraft Corp., San Diego, Calif.

JOHNSON
Automatic TEMPERATURE AND AIR CONDITIONING *Control*

JOHNSON SERVICE COMPANY, MILWAUKEE, WIS. & BRANCHES IN PRINCIPAL CITIES

MONTH IN BUILDING

(Continued from page 4)

the New York City Housing Authority he has under his care today fourteen projects—eight already in operation—involving an expenditure of more than $100 million and providing low rent subsidized accommodations for some 18,000 low income families. Unlike any other U. S. city, New York has several projects financed entirely with local funds; the others are USHA projects.

In his first annual report, Houser Swope last month shed interesting light on the operation of his fourteen charges and their cost to the taxpayers. Annual income in the form of tenants' rents will come close to $5.4 million, or about 5.4 per cent of the program's total cost, and will cover the projects' operating and administrative costs and provide the necessary reserves for repair, maintenance, replacements, vacancies, etc. Interest and amortization charges will be met with Federal, State and local subsidies.

Although tax-exempt, the projects are actually saving the city money, disproving the claims of many opponents of publicly financed housing. To wit: excluding the three projects undertaken prior to the establishment of USHA and present financing methods, the assessed valuation of the projects' sites subject to tax was $17.8 million, and the annual tax rate at the time of acquisition was about $3 per hundred. Taxes *collectible* on these properties thus amounted to $531,000 per year, but *actual collections* came to only about half this sum, $270,000. Interestingly, these properties now yield the city a total of $366,000 per year, a gain of $96,000 or 35 per cent. And, this gain does not reflect incidental savings in garbage collections, street maintenance and the benefits inherent in the replacement of substandard housing with fireproof, sanitary facilities. Moreover, total tax delinquencies on the slum properties at the time of their acquisition amounted to more than $1.2 million which were deducted from the purchase prices to the owners and dropped in the city coffers.

Also interesting is Houser Swope's comparison of city subsidies for transportation vs. housing. Three new projects financed wholly with the city's annual occupancy tax receipts provide housing for some 2,000 low income, resident, tax-paying families and cost about $500,000 per year for interest and amortization. On the other hand, the subways and elevateds serving nonresidents and persons who pay no city taxes, cost the city close to $30 million a year because the politically controlled nickel fares are far from sufficient to foot expenses.

In discussing his program before the New York Building Congress last month, Swope gave four pointed reasons why

(Continued on page 68)

WHAT No Moving Parts MEANS TO TENANTS AND BUILDERS:

TENANT:

Mrs. A. C. Ford
742 S. W. Vista Ave.
Portland, Ore.

"Having used several kinds of automatic refrigeration in apartment houses, I feel that my present Servel Electrolux gas refrigerator is the perfect refrigerator, due to its silence, sturdy beauty, fast freezing and absolute dependability."

BUILDER:

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Portland, Ore.

"As a builder of apartment houses, and having had experience with various kinds of automatic refrigeration, I have become convinced that Servel Electrolux gas refrigerators are best. Tenants like their silent dependability."

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Different from all others...

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Stays silent...lasts longer

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YOU'LL LIKE THIS SECTIONAL UPWARD-ACTING Galvanized Steel Door

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The Kinnear Steel RoL-TOP is built in any size, with either motor or manual operation, and with any desired number of light sections. They are easy to install, in old or new buildings. Write today for complete information.

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KINNEAR ROLLING DOORS

MONTH IN BUILDING

(*Continued from page 66*)

private enterprise cannot, as yet, accomplish the task which his housing authority has assumed: 1) the low earnings of the lowest income group; 2) the high cost of land and, in turn, taxes in metropolitan New York; 3) high interest rates—Swope admitted that the Government's easy money policy had almost solved this problem; 4) the high cost of construction. Branding reason No. 4 as the most important and difficult problem, Houser Swope stumped left-handedly for a guaranteed annual wage for building labor, commented: "There is no thought of decreasing the earnings of labor on construction projects, but . . . high labor rates and consequently high cost of construction make it difficult, if not impossible, for skilled and well paid labor to dwell in the housing provided by their labor." Comparing industrial workers' wage rates, hours and earnings with those of building mechanics, Swope added: "Instead of maybe working 30 hours per week for say 26 weeks, he would . . . work 40 hours per week for 50 weeks with two weeks' vacation with pay. More houses could be built, his work would be steadier and cost of building would be less."

MORATORIUM

With early signs of spring came signs that the real estate depression may be considered a thing of the past. Thus, three separate statements have recently been made to the effect that property owners rescued from depression by the New York State mortgage moratorium law need no longer be mollycoddled. Passed in 1932 and renewed every year since, the moratorium provides that no mortgage in effect prior to July 1, 1932, may be foreclosed for nonpayment of principal if interest and tax requirements are promptly met.

First 1941 statement on the subject came from President George L. Bliss of the New York Federal Home Loan Bank. He pointed out that many safeguarded mortgages had been refinanced because the present low level of interest rates has enticed property owners to leave the "fancied protection" of the moratorium act. In other cases he noted that depreciation and obsolescence are removing whatever equity the owner may have possessed above the mortgage debt and that the passage of time is only aggravating this unhealthy situation. His proposal: where owners of mortgaged property refuse to make a reasonable payment on account of principal, the lenders should no longer be deprived of their right to foreclose. And, in the light of low interest rates and abundant mortgage money, he announced, "It would appear that no better time for lifting the mortgage moratorium can be hoped for. . . . From all available indications, it would appear that basic real estate conditions are

(*Continued on page 70*)

It's the brisk, clean-cut appearance that counts in modern merchandising! There's a quick, easy way to get it—by specifying fluorescent lighting in smart, efficient, Certified★ FLEUR-O-LIER fixtures. Thousands of stores have *already modernized* with Certified★ FLEUR-O-LIERS. Thousands of stores under construction have specified them.

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Shellac dries dust-free within a few minutes; no settling dust or grime can mar it during work.

Shellac repatches easily, quickly, and without lap marks.

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Send for a free copy of the latest standard specifications. It will be your insurance against finishing complaints, your assurance that the floors you put in will boost your reputation as a man who knows his materials!

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Gentlemen: Please send me a free copy for my files of the latest standard specifications for the reference of architects. I want to know more about why the world's oldest finish is the world's most MODERN finish today.

NAME.....

ADDRESS.....

CITY.....STATE.....

MONTH IN BUILDING

(Continued from page 68)

inclined toward material improvement for the first time in more than a decade."

Second statement in favor of a moratorium on the moratorium came from Chairman Orie R. Kelly of the New York State Bankers Assn. who is also president of the Lawyers Trust Co. He and the Association's legislative committee have publicly stated their belief that those New Yorkers who have earnestly desired to save their homes have voluntarily worked out a plan with their mortgagees providing for the repayment of principal and that the others are apparently less interested in retaining their homes than in capitalizing on the protection of the moratorium. Kelly's committee urged bankers the state over to protest another renewal of the moratorium, for "there seems to be an inclination on the part of the Legislature to coast along another year by granting a further extension."

Latest development was the discussion in legislative conference month ago of an amendment to the moratorium law, which would taper off its effect. Thus, chances are that when the plan has been put in bill form it will call for the demise of the moratorium at year-end as far as mortgages on revenue-producing properties are concerned and at the end of next year for all mortgages on owner-occupied houses. The Albany law makers are heading in the direction demanded by the bankers but are not going as fast nor as far as is desired. Bankers' hope is that Governor Herbert H. Lehman, long an advocate of tapering-off the moratorium, may speed them up.

COTTON WALLS

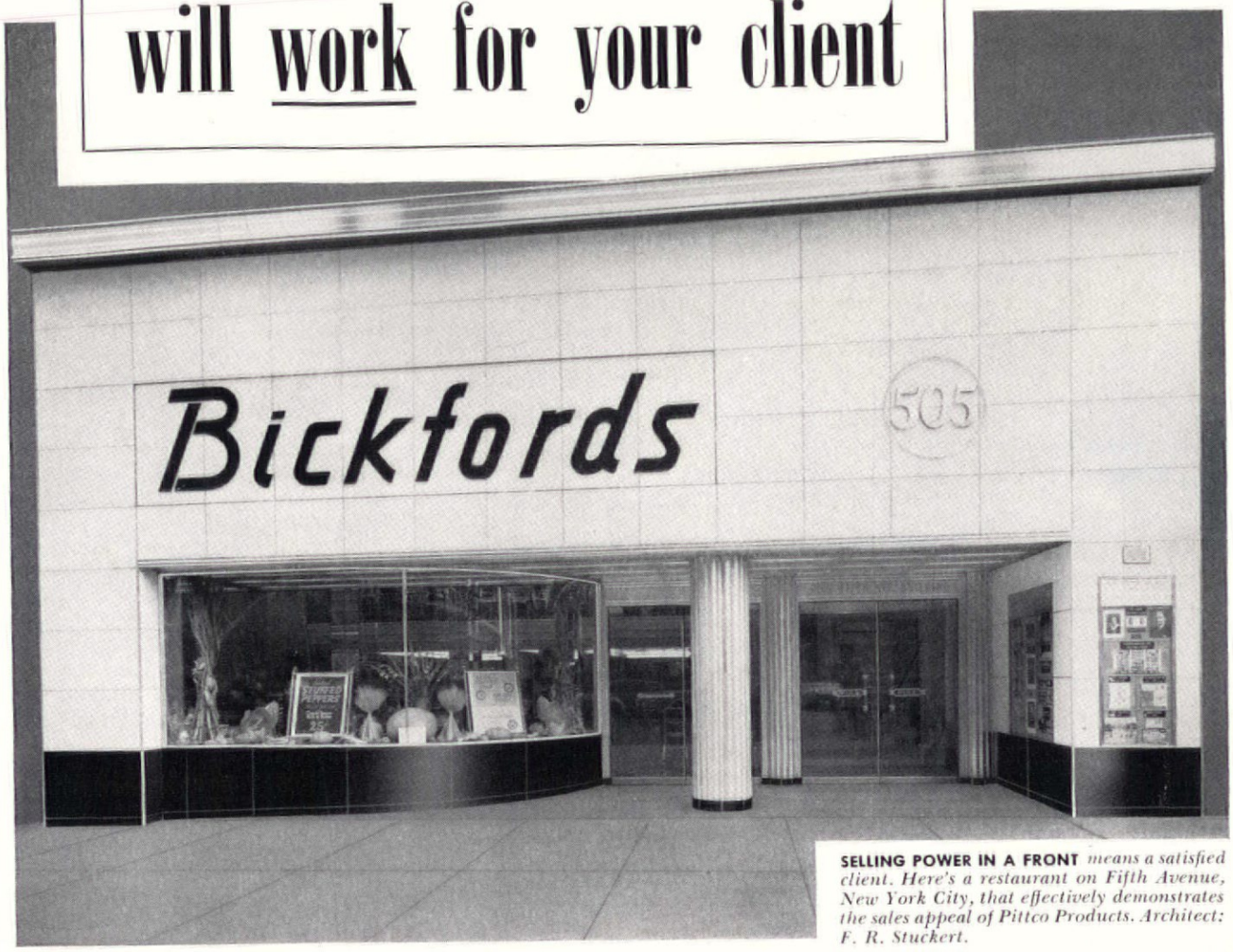
To help the Federal Surplus Marketing Administration tap the South's huge backlog of cotton, the Washington, D. C. housing authority is experimenting with cotton insulation in one of its slum clearance projects (ARCH. FORUM, Feb. 1941, p. 2). Last month another potentially important use of cotton in construction came to light as the Department of Agriculture asked Seattle's Speedwall Company to send it a cotton-covered, prefabricated, demountable house for promotion purposes. Plan is to put the house on display in a patio formed by the Department's Washington office building, then send it on a six-month tour of principal U. S. cities.

A leading West Coast prefabricator, Speedwall uses room-size plywood panels in its construction system. Cotton is affixed to the face of all wall and ceiling panels with waterproof synthetic resin adhesive and is claimed to provide a "perfect" base for decoration with paint or wall paper and a better barrier against wind, cold and vapor. The new cotton-covered panel is now used in the prefabricated houses

(Continued on page 72)

HOW TO BE SURE THE FRONT YOU DESIGN

will work for your client



SELLING POWER IN A FRONT *means a satisfied client. Here's a restaurant on Fifth Avenue, New York City, that effectively demonstrates the sales appeal of Pittco Products. Architect: F. R. Stuckert.*

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

If you have been unable to get MetaLane as fast as you want . . . and in the quantities you require . . . we offer an apology and an explanation.

It's an apology we're proud to make . . . an explanation we know you'll understand.

We're running behind on production and deliveries because the needs of National Defense come first . . . because certain basic materials that go into the manufacture of patented MetaLane are also highly essential to the production of defense equipment.

This is, we are sure, only a temporary condition which will be remedied just as soon as the first surging need of the defense industries levels off and their material needs may be more clearly seen. Meantime, we are continuing the steady production of MetaLane Weatherstrips and filling all orders to the limits of our capacity.

And while we're on the subject of defense and weatherstrips, remember that weatherstrips made of MetaLane are the Home Owner's best defense against the draft and dirt that filters into the house through windows and doors. MetaLane is the only weatherstrip material that won't corrode, oxidize or change color . . . that won't stain paint, stone or woodwork . . . that is not affected by salt atmosphere, smoke or alkalies. It has a spring-like quality of self-adjustment to be found in no other weatherstrip material. It's this spring-like quality of self-adjustment that assures "fingertip-control" when weatherstrips are made of MetaLane.

Even though the requirements of National Defense may slow down production and deliveries, MetaLane is the weatherstrip material that is worth waiting for. So—keep your orders coming, but be patient. We're "standing by" for Uncle Sam. Monarch Metal Weatherstrip Corporation, 6406 Etzel Avenue, St. Louis, Missouri.

Monarch METALANE* WEATHERSTRIP

MFD. ONLY BY MONARCH METAL WEATHERSTRIP CORP. • ST. LOUIS

*REGISTERED U. S. AND CAN. PAT. OFF.

MONTH IN BUILD

(*Continued from page 70*)

which Speedwall sells on the regular market.

The Department of Agriculture display house contains five rooms, measures 32 x 24 ft., and is clothed in some 4,500 sq. ft. of cotton textile. It thus required only a small piece of the 1.25 million sq. ft. of cloth ordered by Speedwall in February. Speedwall apparently has orders in sight for 277 more houses of comparable size, although month ago Government officials, despite the company's boast of a demountable construction system, had not sent a defense housing contract its way.

LARGE SCALE SQUABBLE

No news is the fury raised almost daily when private enterprise feels that public housing is stepping on its toes. News indeed, however, is the cry of private enterprise against private housing. Such a cry went up in Los Angeles last month against the large scale housing project proposed the month before by Metropolitan Life Insurance Co. (ARCH. FORUM, Feb. 1941, p. 2) which is the world's second biggest private enterprise (biggest: American Telephone and Telegraph). The cry came from the mouths of Property Owner Mabel K. Ostby, Policyholder Marguerite Levan, the California State Apartment Conference and the Apartment Assn. of Los Angeles County, Inc. And, while it immediately concerns the constitutionality of enabling legislation passed by a special session of the California Legislature last December, the cry is essentially one of competition. As in its Parkchester project in New York City's Borough of the Bronx, the Met plans to shave costs by direct 100 per cent investment (no mortgage), direct construction and direct operation and thus achieve rents well below the local average for comparable new construction.

Until the Met-sponsored law was passed, the permanent ownership of rental housing projects by insurance companies was prohibited in California. However, they were permitted to deduct their local real estate taxes from the gross premium taxes collected by the State *. Under the new law, insurance companies which build and own housing projects must waive this tax deduction right. If the law or the waiver proviso is subsequently ruled unconstitutional, the operation of the projects would be governed by the previously existing law and the properties would have to be sold within a five-year period.

A property owner in the neighborhood of the Met's proposed new project, Mabel

(*Continued on page 74*)

* Figured at 2.6 per cent of annual gross premiums, the Met's California tax last year came to some $831,000, less the $118,000 it paid in real property taxes—a net of $713,000.

For half a century, the Frank Adam Electric Company has been privileged to render service in the panelboard and switchboard field. Only a quality ideal behind the product, and an appreciation of that ideal by the electrical trade could have made this possible . . . Better and safer materials and equipment — at progressively lowered cost to the user — has been the watchword . . . For the Architect, and for the Owner he represents, the prime consideration has been improved design and a long life of satisfactory service . . . For the Electrical Contractor, ease of installation — so that his good workmanship would show to best advantage . . . For the Wholesaler, distribution through legitimate channels . . . It is with these ideals that we have flourished. It is with these ideals that we hope to continue serving our industry.
EST. 1891
THE SIGN OF A BETTER JOB
FA
Frank Adam
1891 FIFTY YEARS SERVICE 1941
FRANK ADAM ELECTRIC CO.
ST. LOUIS, MO. U.S.A.

NO MORE *"Thinking Twice"* ABOUT PERMANENT COLOR FOR WALLS . . . . .

Here is a beautiful, long-wearing material . . . practical even for limited budgets

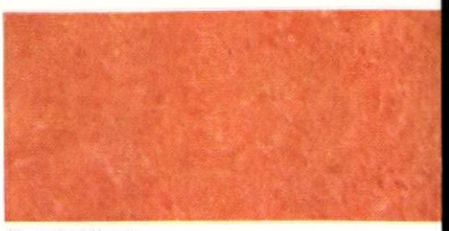


Illustration 1/4 scale.

Nairn Wall Linoleum, "Gladiolus Red," No. 7952.

Nairn Wall Linoleum, "Parchment," No. 7973.

Illustration 1/4 scale.

TWO PATTERNS in Nairn Wall Linoleum, creamy "Parchment" and "Gladiolus Red," perfectly color-correlated, increase the lasting beauty of this cheerful modern kitchen. It is completely sanitary and easy to clean. And think what elimination of annual redecorating means to the housewife in the way of savings in time, expense and bother.

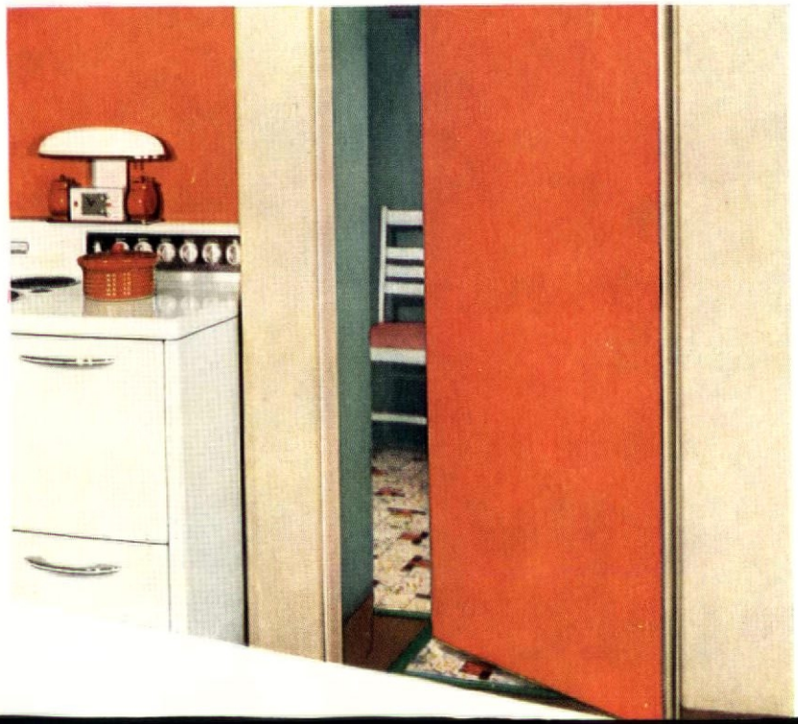
IN PLANNING distinctive decorative effects for any room, architects and builders need hesitate no longer about using permanent color for walls because of the price factor. Nairn Wall Linoleum—built to last as long as the house itself—is not only beautiful, but *moderate in cost* . . . entirely feasible even for small residences.

Available in a wide range of patterns—delicate pastels, rich dark tones, mottled and striated designs—Nairn Wall Linoleum will harmonize with every color scheme. And its extreme flexibility makes it adaptable to any structural design, permitting smartly rounded effects at inside and outside corners and openings.

When installed by Authorized Contractors, Nairn Wall Linoleum is fully guaranteed. Write for 16-page *free* booklet, "Nairn Linoleum for Floors and Walls."

CONGOLEUM-NAIRN INC., KEARNY, NEW JERSEY

NOTICE HOW this flexible material completely eliminates the necessity for door jambs . . . contributes a modern "streamlined" effect. The use of Nairn Wall Linoleum on doors need not be limited to new construction. Old, panelled doors may be filled with plywood and covered with this modern wall material.



NAIRN

Reg. U. S. Pat. Off.

WALL LINOLEUM

More for the money— Inside and Out!

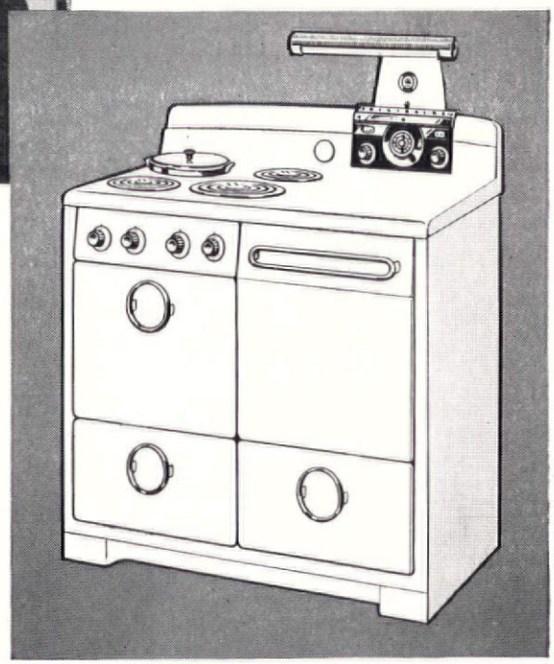
1941 FRIGIDAIRES

Why Tenants Prefer Them

Brilliant New Beauty! A world-famous designer has created for Frigidaire completely new concepts of refrigerator and range beauty for the kitchen. Brilliant new cabinet styles, with equally smart interior styling. Range innovations include ultra-modern fluorescent lighting.

More Useful Than Ever! New refrigerator food compartments are bigger and roomier with new frozen storage compartments up to 74% larger. Ranges have new Radiantube cooking units that are 18% faster. Both Frigidaire ranges and refrigerators offer a score of convenience features.

Use Less Current! Bigger 1941 Frigidaire Sixes have 22% more power to keep foods and freeze ice! Yet they *cost less to operate* than any previous comparable models. Exclusive new Radiantube units on ranges are 15% more efficient. Lowest cooking costs in Frigidaire history!



Frigidaire Offers Sensational New Values!

● The 1941 Frigidaire line offers a choice of more than a dozen brilliant refrigerator models and 6 beautiful ranges, including several models designed especially for apartment house use. Inside and out, these new refrigerators and ranges offer more for the money than even last year's great models. Every Frigidaire is a bargain-priced value.

● Choose from 6 brilliant new Frigidaire Electric Ranges in 2 great new series. Every one packed with convenience and economy features. (1941 De Luxe Model B-60 illustrated.)

Specify the favorite –

Specify Frigidaire

... over 6 million built and sold

(AF-4)

FREE! Architect's File Folder

Clip this coupon, attach to your letterhead and mail to Frigidaire Division, General Motors Sales Corp., Dayton, Ohio. Folder gives complete specifications on all Frigidaire Household Appliances—Electric Refrigerators, Ranges and Water Heaters.

ASK THEM WHICH LINOLEUM
they expect in your houses

TAKE A TIP *from the housewives you plan and build for. Give them smart, easy-to-clean Armstrong's Linoleum floors—the kind they know best. In this kitchen, the sink top and floor are No. 042 Monobelle Linoleum, with discs of No. 23 White. Walls are washable Armstrong's No. 737 Parchment Linowall—another product that makes houses more salable.*

CHANCES are that the vast majority of women will say *Armstrong's* Linoleum. Why? What is responsible for this flooring's overwhelming acceptance?

First, the product itself. The women you plan and build for know that Armstrong's Linoleum wears well . . . because they are using it now, or other women have told them so. They know it is comfortable, quiet, easy to clean. And they like the beautifully designed patterns and rich colors.

Second, Armstrong has been advertising this linoleum for 24 years. The famous "Armstrong Rooms" in these color advertisements have inspired many a woman to have a home of her own. So, naturally, women look for Armstrong's Linoleum in your houses.

Armstrong's Linoleum is *not* expensive. The economical Standard Gauge will appeal to you if you specialize in low-cost homes. Find out more about this quality flooring now. Refer to *Sweet's* and *Home Owners' Catalog*. Armstrong Cork Company, Floor Division, 1203 State St., Lancaster, Pennsylvania.

ARMSTRONG'S FLOORS
LINOLEUM

Rubber Tile - Linotile (Oil-Bonded) - Asphalt Tile - Cork Tile - Linowall Wall Covering

MONTH IN BUILDING

(Continued from page 72)

K. Ostby sought legally to restrain the Met on the grounds that vacancies were increasing, that rents were going down and that the successful operation of her apartment building would be jeopardized by the addition of the Met's 2,400 lower rent units. A temporary restraining order was granted, but month ago Superior Judge Emmet Wilson removed the legal barrier by ruling that Property Owner Ostby's competition argument was too weak to stand.

Judge Wilson also shot holes in the case of Marguerite Levan, a Met policyholder who likewise sought legally to nip the housing project in the bud. Her argument: if the enabling legislation is proved unconstitutional and the Met must promptly sell the project, the transaction might well entail a substantial loss to the disadvantage of the company and its mutual policyholders. The court, however, ruled that it was now impossible to determine whether or not the sale of the project would involve a gain or loss.

More moral than legal, the third hurdle placed in the huge project's way was an open letter by President E. N. Ayer of the California State Apartment Conference to the Met's Chairman Frederick H. Ecker, calling upon the insurance company to test the questioned constitutionality of the enabling legislation prior to the obtaining of building permits for the controversial housing project. The Conference claims that, should the law be voided and the former tax deduction procedure necessarily be followed, the State would lose some $600,000 annually—the estimated tax deduction for the $15 million Los Angeles project and a similar $10 million development scheduled for San Francisco. Moreover, in this case, the Met would enjoy an unfair competitive advantage over other insurance companies not permitted to build and operate such projects and over all owners' income producing properties.

Fourth voice to fill out the quartet of protestants was that of the Apartment Assn. of Los Angeles County. Expressed last month in a public statement by President John E. Owen, the Association's argument and conclusion are much the same as the State Conference's: "We do not believe that the Legislature intended that any insurance company should have a competitive advantage over other property owners—and particularly over property owners who may be borrowers of funds entrusted to the care of that company."

Mindful that these protests are aimed more at heading off a powerful and much needed low rent competitor than at protecting the interests of California citizens and the State tax structure, the Met fortnight ago announced that, barring further legal setbacks, the project would proceed at once.

IN 1851 – *the year of the* GREAT LOCK CONTROVERSY

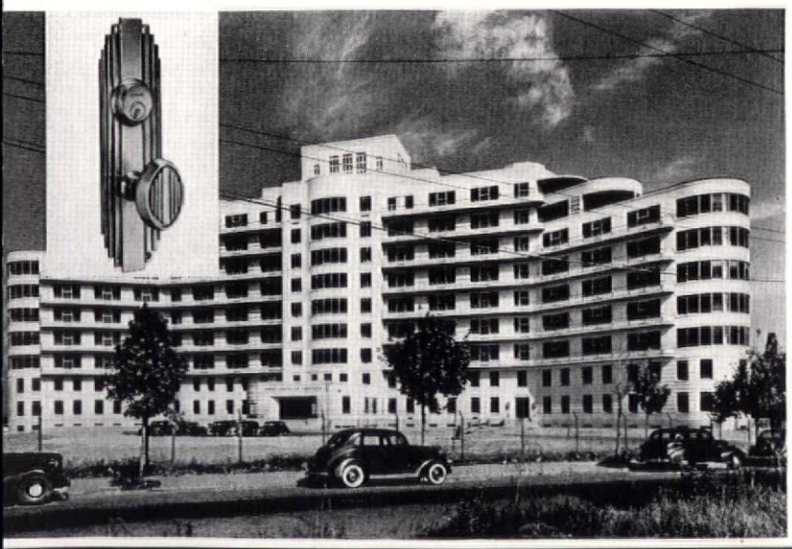
1851 . . . "a memorable year, a period which will ever form an epoch in the progress of the arts and of manufactures."

In that year, the Crystal Palace Exhibition was held in London. There, a conspiracy of silence was uncovered among English locksmiths who long had refrained from exposing the inadequacy of English-made locks. Alert American locksmiths picked the English locks with ease. Immediately, the London Times and other newspapers took up the controversy — and helped to end the era of simplicity in lock construction.

In that same year — 90 years ago — William Harbster, young, vigorous and farsighted, turned his blacksmith shop at Reading, Pennsylvania, into a manufactory of builders' hardware. Soon he was producing locks, bolts, latches and hinges which the architects of the country specified with pride.

IN 1898

In the History of Reading, published in 1898, appears this statement: "They continued to increase their trade year after year, making a specialty of furnishing large hotels and office buildings at New York, Philadelphia and Chicago, with all the necessary hardware. *In this they were very successful, for their unique and artistic designs in fine bronze obtained the preference with the most prominent architects and builders in the country.*"



TODAY... This year, Reading celebrates its 90th Anniversary. Good design, mechanical excellence and a reputation for service to the building industry are still gaining for Reading "preference with the most prominent architects and builders in the country." Many of today's finest buildings are equipped with Reading Hardware.

FOR TOMORROW... Day of great enterprise and fulfillment of architects' and builders' dreams — Reading has many plans. Plans that will reveal new beauties, new service values — that will add artistic and practical advantages to our buildings of the future. Reading Hardware Corporation, Reading, Penn., *Branch Offices:* New York, Philadelphia, Chicago, San Francisco.

A Reading Hardware Installation. Triboro Hospital for Tuberculosis, Jamaica, Queens, New York City. Eggers & Higgins, Architects.

GOOD HARDWARE **READING** SINCE — 1851

CELEBRATING 90 YEARS OF SERVICE TO THE BUILDING PROFESSIONS

No Matter What the Humidity...

...Here's a Hardwood Floor that Stays FLAT

● The widely varying humidities of spring and summer days have no chance to work their usual havoc when the flooring is Haskelite Compound Lumber. Compounded of waterproof-bonded veneers, Haskelite stoutly resists the tremendous expansive force that moisture exerts on wood . . . resists equally well the contraction that occurs when the building dries out. And instead of warping, cupping and buckling, Haskelite stays flat—and permanently beautiful.

That means hardwood flooring satisfaction as it's never been known before. It opens up to architects an opportunity to use *wood* for floors, where wood is the only material that satisfies design or utility requirements.

Look into Haskelite for the jobs now on your boards. Full details on its penetrated finish (a story in itself), its easy installation, sizes, etc., are in *Sweets, Sec. 11, Catalog No. 84.* For free samples, technical details, or other data, write us direct.

➤ ➤ ➤ ➤ ➤ *Eyes Right for More Facts on Haskelite* ➤ ➤ ➤ ➤ ➤

HASKELITE MANUFACTURING CORPORATION
Dept. A414, Flooring Division
208 W. Washington St. Chicago, Illinois

HASKELITE *Compound Lumber* **FLOORING**

HEADWAY & HEADACHES

(Continued from page 14)

In addition to the two "formal priority" actions, Stettinius' OPM division last month put fabricated aluminum parts, magnesium, neoprene (synthetic rubber) and commercial aircraft in the "allocation" classification. Allocations are officially defined as "cases in which the (priority) principle has been employed on a broad scale, action being taken in the form of specific allocations, with or without actual issuance of ratings."

A third classification, labeled "cooperation," is comprised of cases in which the general principle of the priority system has been applied informally and on a voluntary basis. Officially classed in this group last month, along with zinc and potassium percholorate, were structural steel shapes and stainless steel. Said Stettinius of the former: "Efforts to expedite the flow of structural steel shapes into defense construction were inaugurated when consumers began to experience difficulties in obtaining these necessary construction supplies on short delivery. As a result of a conference between representatives of the Priorities Division and the steel companies, producers have undertaken to fill defense orders as promptly as possible." (Orders for fabricated structural steel booked by the industry in January totaled 258,499 tons, up 130 per cent from the monthly average for the past ten years. At 150,375 tons, January shipments almost equalled the twelve-month total for 1931.)

PREFABRICATION

Since THE FORUM last month reported (p. 174) the conspicuous neglect of the prefabricated house industry by Government's non-Navy defense housers, several newsworthy developments have occurred. Most important, the Public Buildings Administration let its first contract—small but significant — for prefabricated houses, quickly followed it up with five others. To Cleveland's E. F. Hauserman Co., a newcomer in the prefabrication field but a long-standing manufacturer of demountable steel office building partitions (many of which subdivide Washington Government buildings, including PBA's) went the honor of receiving the first contract for twenty houses at an erected cost of $61,752 or $3,088 per unit.

Covering 50 houses each, the other contract awards went to: 1) Standard Houses Corp. of Chicago, another prefabrication upstart (ARCH. FORUM, Jan. 1940, p. 66), on a bid of $141,550 or $2,831 per unit. 2) Home Building Corp. of Kansas City, a small, almost-unknown organization, at $127,000, or $2,540 per unit. 3) Allied Housing Associates, Inc. of Langhorne, Pa., a fabricator of Homasote "Precision-Built" houses and producer of Homasote's guinea pig defense house (ARCH. FORUM,

(Continued on page 77)

HEADWAY & HEADACHES

(Continued from page 76)

Dec. 1940, p. 531), at $134,600 or $2,692 per unit. 4) National Homes Corp. of Lafayette, Ind., a highly successful one-year-old (ARCH. FORUM, Mar. 1941, p. 178), at about $149,900 or $2,998. 5) Tennessee Coal, Iron and Railroad Co. of Birmingham, Ala., the nation's No. 1 steel house prefabricator (ARCH. FORUM, Feb. 1941, p. 84), at $138,900 or $2,778 per unit.

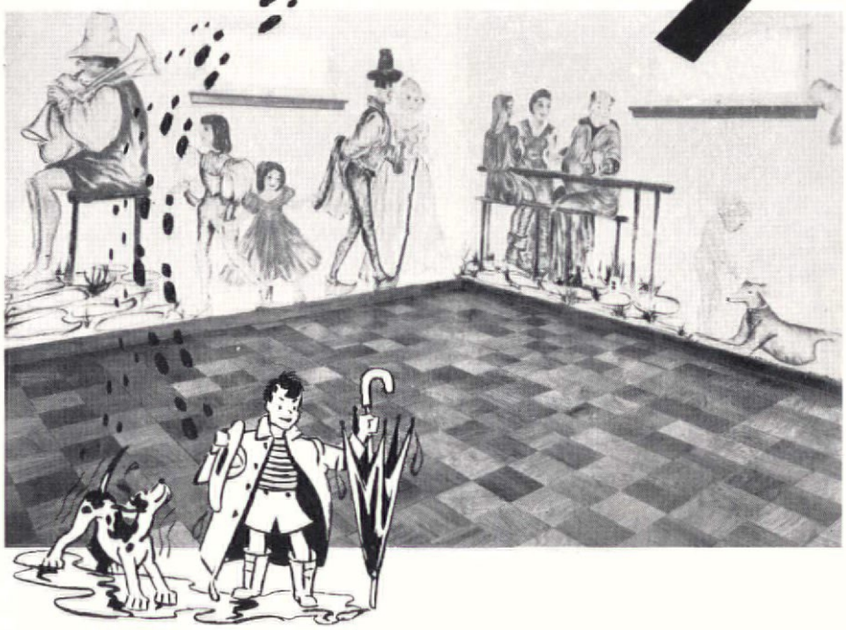
All six contracts covered the erection of houses at PBA's ballyhooed but belated prefabriaction "demonstration" project at Indian Head, Md. And, all six require that the prefabricators handle the erection of their house parts, either by themselves, or via a subcontractor. This is a concession on PBA's part, in that the agency formerly insisted that all defense housing projects be entrusted to general contractors, many of whom are unsympathetic to prefabricated construction systems. Only general contractor at Indian Head is the George Hyman Construction Co. of Washington, D. C. whose $469,500 contract covers merely grading, road building, utility installation and other site preparations. (Thus, the unit costs quoted above pertain only to the actual houses.)

With the exception of the Hauserman contract, all of them contain an "escalator" clause which gives PBA the option of ordering additional houses from these prefabricators at the same unit prices. Chances are that this clause will be invoked and that these companies will be asked to build most of the 650 houses scheduled for the site. Reason: other prefabricators, including the industry's leaders, have balked at PBA's demand that they quote guaranteed erected prices while builders of conventional houses are privileged to work without risk under cost-plus-fixed-fee contracts. They held out for a combination deal involving a guaranteed delivery price and a cost-plus erection contract, but PBA would not budge. At mid-month, it appeared that if any other prefabricators were added to the Indian Head list they would be PHC Housing Corp. and Humphrey Horsley Co., two little known outfits which have barely emerged from the experimental stage.

Three other contracts for prefabricated defense houses are bigger, non-demonstration and somewhat startling in their details: 1) To McCloskey & Co. of Philadelphia, a top-notch contractor but novice prefabricator, a $966,000 order with a $44,000 fee for 250 houses and their roads and utilities at Aberdeen Proving Grounds at Havre de Grace, Md. 2) To Engineers Ltd., general contractors of San Francisco, a $3 million order with a $105,000 fee for 316 "permanent" units and 608 "prefabricated, demountable" units at the Mare Island Navy Yard at Vallejo, Calif.—no details as to the sub-contracting prefabricator. 3) To the new Day Housing Corp. of New York.

(Continued on page 80)

Even in Basements . . .



. . . This Floor Stays FLAT

● The one thing that's needed above all else in a basement finish floor is *inertness* to moisture. That's a requirement completely and successfully met for the first time in a WOOD floor with Haskelite. This "successor to solid wood floors" stays flat, without warping or cupping, in the face of the long, humid months that are just ahead . . . yet offers, as no composition flooring can, the comfort, beauty and warmth, characteristic of wood alone.

Both Haskelite Block and Plank are furnished in prime oak, rotary cut from selected logs with a medium or dark factory-applied finish. It's a unique "penetrated" finish that permits local touching up or removal of soiled or worn spots without refinishing the entire floor.

Make it a point to have full details on Haskelite ready for discussion with your next clients.

See Opposite Page for Details on Plank

HASKELITE MANUFACTURING CORPORATION
Dept. A414, Flooring Division
208 W. Washington St. Chicago, Illinois

HASKELITE *Compound Lumber* **FLOORING**

Carrara IS PRECISION-MADE FOR BEAUTY THAT ENDURES

EVERY piece of Carrara Structural Glass is mechanically ground and polished* to a true, flat surface. It is a finely-machined product, possessed of reflective qualities and depth of color impossible to achieve in any glass not precision-made. Carrara joints are smooth and without lippage. Carrara will not warp with time. It will not check, craze, stain, fade or absorb odors. Chemicals, moisture, pencil marks are powerless to harm it. It is easy to clean with a damp cloth. It stays young and new-looking through the years.

This is a quality structural glass, ideal for scores of architectural uses. Here are a few of them: toilet room walls and partitions, lobby and reception room walls, sill covers, niche linings, shelves. And the glass can be decorated by shading, fluting, sandblasting, etching, painting and laminating to create striking effects.

Write for our free booklet "Carrara, the Modern Structural Glass." It is full of facts and illustrations. Address Pittsburgh Plate Glass Co., 2095-1 Grant Building, Pittsburgh, Pa.

**The new Suede-finish Carrara has its surface reflections softened by a special treatment after grinding and polishing.*

"PITTSBURGH" stands for Quality Glass and Paint

Here is a reception lobby in an office building which shows the design possibilities of Carrara Glass. Ivory and Forest Green Carrara are used to create attractive, reflective walls. Note that Carrara can be bent, as at the end of the built-in divan. There are ten appealing Carrara colors to choose from.

CARRARA

The modern Structural Glass

PITTSBURGH PLATE GLASS COMPANY

Hospitality

is expressed in rooms of Genuine White Pine. They create that atmosphere of warm informality, while retaining an air of confident dignity.

Genuine White Pine is pleasant to live with because it is so beautiful in all its wide variations of decorative treatment. It grows old gracefully, mellows with time.

This famous lumber also makes its bid in the interest of economy, which recommends it for the modest cottage as well as for the best home. Rooms of White Pine, oiled, waxed, stained, enameled or painted require decorating less frequently.

In fine paneling work the wood must nail easily without splitting. It must stay put under service conditions. These requirements are admirably met by Genuine White Pine.

CLEARLY IDENTIFIED . . . ACCURATELY MILLED

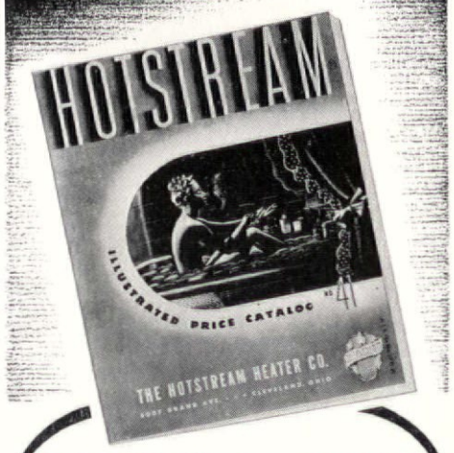
4-Square Genuine White Pine has all the ready-to-use improvements of other 4-Square species. It is accurately manufactured to exact standard lengths with smooth, square ends and surfaces. The ends of each piece are plainly marked "Genuine White Pine" and "Weyerhaeuser 4-Square."

Genuine White Pine is neither scarce nor expensive. Modern methods of harvesting timber as a crop insure a bountiful supply of this famous lumber for the years to come.

WEYERHAEUSER 4-SQUARE LUMBER

WEYERHAEUSER SALES COMPANY
FIRST NATIONAL BANK BUILDING • SAINT PAUL, MINNESOTA

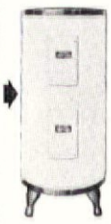
WHY GUESS ABOUT *Water Heating?*



HOTSTREAM 41 CATALOG *gives you the complete "True Story"!*

235 styles and sizes—the most complete line of water heaters in the world—are described in this book. It also gives you all the information needed to recommend, specify and install *exactly* the right unit—regardless of size, budget, or fuel requirements.

HOTSTREAM "TABLE TOP" For the built-in modern kitchen. For electricity and every kind of gas. 6 styles and sizes.

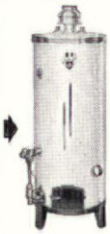


ROUND ELECTRICS Approved by Underwriters', TVA, EFHA, REA, Edison Electrical Institute and Utilities. 13 styles and sizes, from 10 to 82 gallons.

OIL-BURNING AUTOMATIC Perfect answer when neither gas nor electricity are available. Yields 1531 gal. hot water for only $1.00 (80° rise). 30 and 40 gallon capacities.

HOTSTREAM "FEATURE" This deluxe unit is "Best by Test." Incorporates numerous exclusive features. It's "tops" in performance and economy. Guaranteed 20 years. 18 styles and sizes.

HOTSTREAM "CABINET" For any kind of gas or electricity. Gleaming white Dulux cabinet. For modern kitchen or finished basement. Guaranteed 10 years. 14 styles and sizes.



HOTSTREAM "DIXIE" Popular medium priced gas unit. 24 styles and sizes. Guaranteed 10 yrs.

This book will be an invaluable reference to you on the science of water heating. Write for your copy now.

THE HOTSTREAM HEATER COMPANY
8007 Grand Avenue • Cleveland, Ohio

HEADWAY & HEADACHES

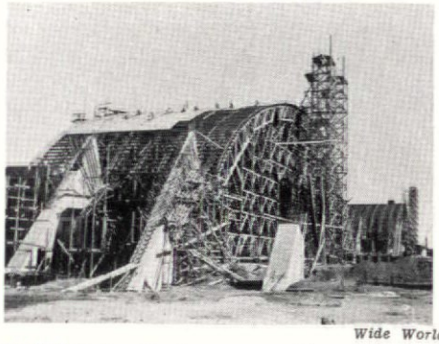
(Continued from page 77)

an order for 500 units from Wheeler Construction Co. of New York, general contractor for the Camden, N. J. project being handled personally by Col. Lawrence H. Westbrook, assistant to Federal Works Administrator Carmody. The prefabricating subcontract for these houses for CIO shipyard workers was first offered to American Houses, Inc. with the provision that a new CIOrganized fabricating plant be erected near the project's site. American Houses argued that its AFL-operated Kearny, N. J. plant, connected with the site by super highways, was near enough, thus lost the business. Forthwith, Joseph P. Day, famed real estate auctioneer and American Houses' salesman, struck out on his own, formed a prefabricating company, landed the Camden contract.

Another significant development of the month on the prefabrication front was a conclave of the industry in Washington which presented its case to Government officials and discussed the formation of a trade association. Through Spokesman Foster Gunnison, president of the pioneering Gunnison Housing Corp. of New Albany, Ind., the prefabricators advised Federal Works Administrator John M. Carmody and his PBA underlings that it would be ruinous for them to bid for defense contracts on a guaranteed erection cost basis. Reason: there is no telling how well or how economically an inexperienced contractor might erect their house parts, and, under conditions prevailing at most defense housing project sites, there is no telling how much it would cost the prefabricators themselves to assemble the parts. Hence, their stand for a guaranteed delivery price and a cost-plus erection price.

At a supper meeting, the prefabricators heard the proposal for organization of a trade association, generally approved of it, but failed to take definite action. As outlined in a preliminary prospectus, the association would have a minimum annual budget of $40,000, cash for which would

(Continued on page 82)



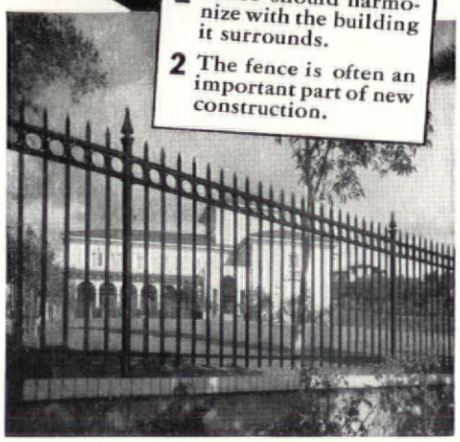
Wide World

Centering for the huge supporting arches of Flying Fortress hangars reveal the shape of buildings to come at Airdrome Boringuen, an Army Air Base on the tip of Puerto Rico. The $16.4 million project is in the hands of Architect-Engineers Graham, Anderson, Probst & White and Contractors McCloskey & Co.

SHOULD ARCHITECTS SPECIFY FENCE? *Yes-Because*

1 Fence should harmonize with the building it surrounds.

2 The fence is often an important part of new construction.



WHY DO MANY ARCHITECTS *Specify* **ANCHOR-WELD IRON FENCE?**

1. For BEAUTY: Architects specify Anchor-Weld Iron Fence because its unusual strength makes center-supports and cross-bracing unnecessary. Each panel will support one ton of distributed load. Made in a wide selection of standard designs or to your own individual requirements.

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OF COURSE AN ARCHITECT WOULDN'T SPECIFY
A BUNGALOW DOOR FOR A COLONIAL MANSION . . .

THEN—WHY SO MANY FINE BATHROOMS EQUIPPED WITH PUNY CABINETS?

WE often wonder why so frequently you find truly gorgeous bathrooms equipped with cabinets that are entirely inadequate, both as to appearance and for properly serving the needs of the family.

Frankly, we can't understand it, unless perhaps some architects are not fully familiar with the incomparable nature of MIAMI Cabinets and the astonishing breadth of the MIAMI Line.

Of course we do not suggest an expensive cabinet for the bathroom that doesn't deserve it. But we do believe a really fine bathroom is entitled to a MIAMI Cabinet or ensemble that is consistent in quality and price with the other appointments.

The MIAMI Line includes cabinets that meet the exact requirements of every type home, from cottage to mansion — cabinets and ensembles, with extra recessed shelves and towel space, that are correct in size and completeness to properly serve the needs of any family.

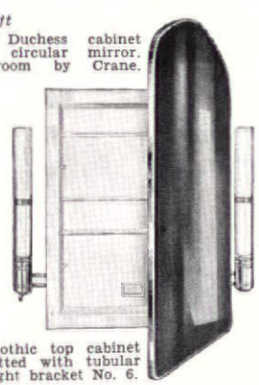
MIAMI service can assist you in planning bathrooms of beauty and distinction for any home, hotel or institution. See Catalog in Sweet's, talk to our representative, or write us, Department AF.

MIAMI CABINETS

AND ACCESSORIES

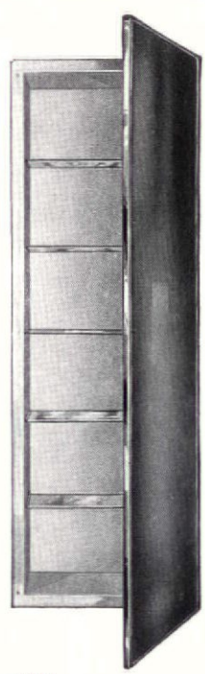
MEET EVERY NEED—EVERY PRICE CLASS
SPECIFY ADEQUATE CABINETS FOR YOUR BATHROOMS

At Left
The Duchess cabinet with circular mirror. Bathroom by Crane.

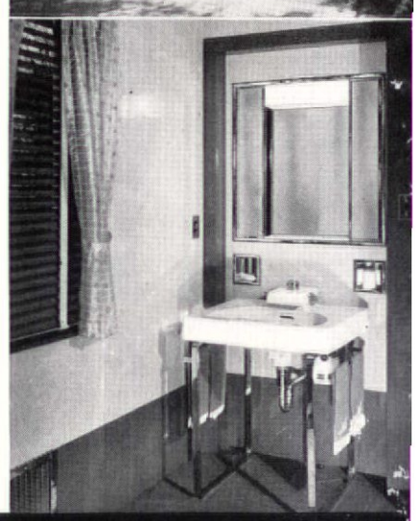


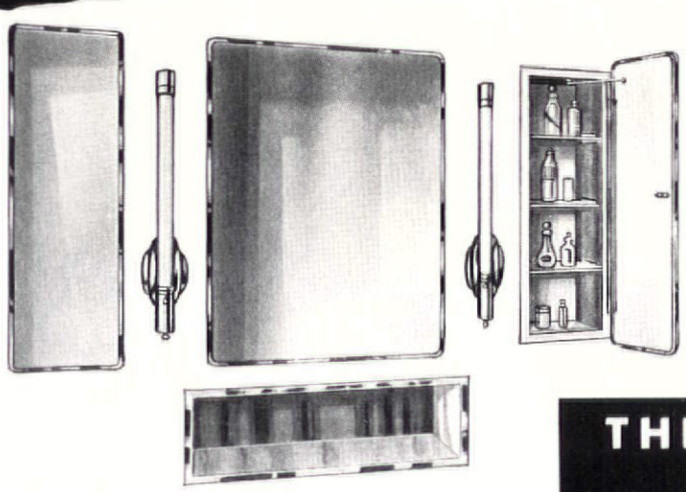
Gothic top cabinet fitted with tubular light bracket No. 6.

Above
Mirror lined recess shelf No. 900.



Right
Towel supply cabinet No. 510. 20" by 60".





Left
Master Ensemble: Center mirror, two side cabinets, two fluorescent light brackets, recessed shelf.

Right
Imperial cabinet in home of H. J. Lang, Cleveland. George B. Mayer, Architect.

THE MIAMI CABINET DIVISION
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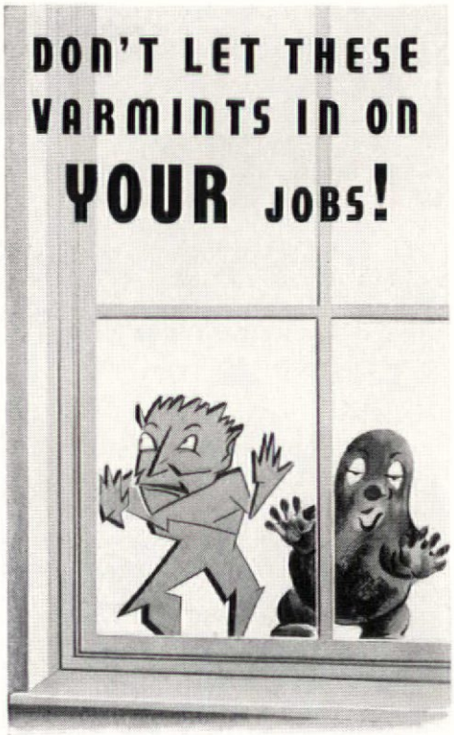

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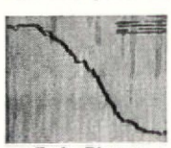
For WALLS and CEILINGS

Plaster cracks and soiled walls have no place in today's modern homes. So *out* with old Double Trouble—prevent the ruin of walls and ceilings in the homes *you* plan. Specify Wall-Tex *fabric* wall coverings. Then you'll *protect* and *preserve* the beauty of interiors.



Ends Plaster-Crack Troubles

Wall-Tex is a sturdy and repeatedly washable wall canvas that actually becomes a structural supporting part of walls and ceilings. It discourages cracks from forming—hides them if they should occur, provides enduring beauty.

Repeatedly Washable —Keeps Like New!

Wall-Tex comes in plain canvases (ideal as a base for paint) and more than 200 decorative patterns. Smart, modern, *protective.* Include Wall-Tex in *your* specifications. It will please your clients—and increase the value of their property.

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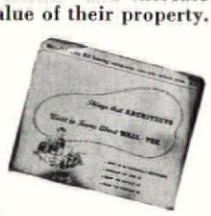

Columbus Coated Fabrics Corporation
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Send your building and architectural data file and swatches of Wall-Tex to—

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

HEADWAY & HEADACHES

(Continued from page 80)

come from dues payments of $10 per year per house produced by regular members (minimum: $600 per year) and from flat $1,000-$5,000 annual fees to be collected from various classes of associate members (non-prefabricators interested in the expansion of the industry). With this money the projected association would among other things, 1) develop and coordinate the common interests of its members, 2) combat anti-prefabrication forces, 3) foster the mass purchasing of houses by Government and private consumers, 4) assist in the establishment of uniform building codes which would recognize the structural qualities of prefabricated houses, 5) maintain a systematic information service, 6) launch a publicity and public relations program, 7) study the possibility of forming a transportation bureau which might engineer the combination of l.c.l. (less than railroad carload lot) prefabricated house shipments into full and less expensive carload shipments.

CANTONMENT COSTS

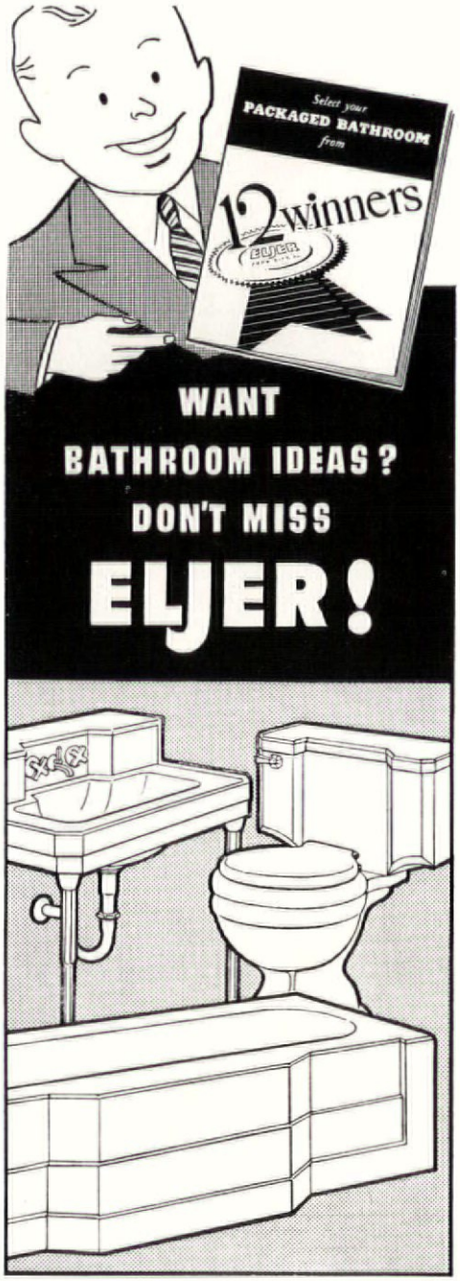
With the passage last month of the $1.5 billion Fourth Supplemental National Defense Appropriation Bill came the official explanation of the unexpectedly high cost of the Army's cantonment construction program. Briefly, the reasons and their relative importance are these: 1) changes in plans and underestimates of costs, 15 to 25 per cent; 2) advances in material costs and labor wages, 25 to 35 per cent; 3) enlargement of the program, 50 to 60 per cent.

Worthy of particular note in the War Department's $695 million appropriation are the $339 million covering the completion of cantonment construction already under way, the $236 million for additional construction required to complete the cantonment program, the $15 million for the launching of engineering surveys.*

Construction completion. Anticipating the questions that Congress would ask when he submitted his request for more money, Col. Brehon B. Somervell launched a thorough survey of the cantonment program when he was made Chief of the Quartermaster Corps Construction Division in mid-December. Entrusted to Engineers Slaughter, Saville & Blackburn, Inc. of Richmond, Va., the survey covered 58 fixed fee contract jobs and 44 lump-sum contract jobs —a large enough sampling to produce data typical of the entire 186-project program. In general, the engineers concluded that the construction program exceeded the Army's original $609 million estimate because:

(Continued on page 84)

* The Navy Department's $738 million request included in the appropriation bill was only $1.3 million more than the original Budget Estimate, and is not discussed herein.



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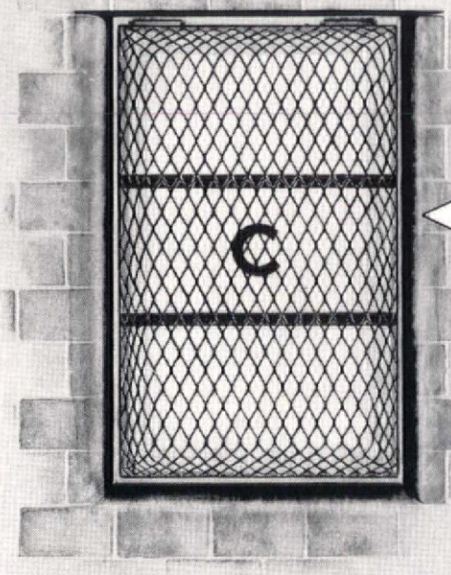

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Steelcrete *Expanded Metal*

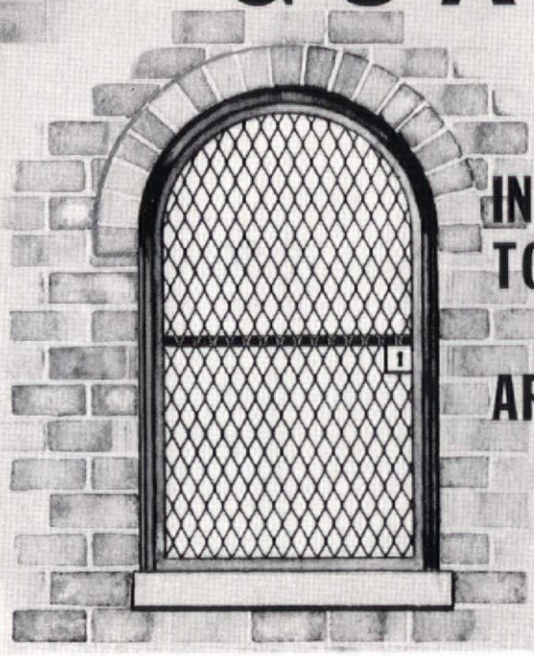
WINDOW GUARDS

NEW TOP-HINGED CURVED STYLE

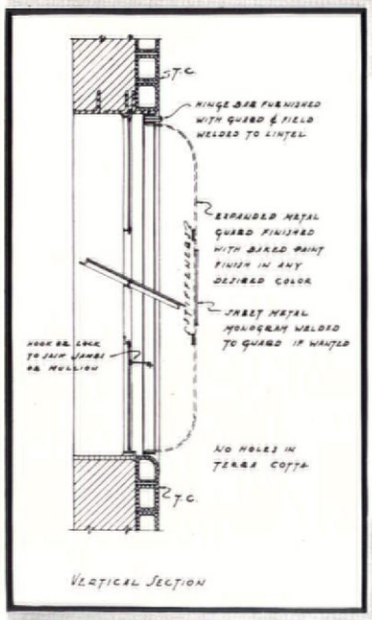
The guard has hinge bar at top which can be tack-welded to the steel lintel over window. See detail drawing below.

NEW SIDE-HINGED ARCH TOP STYLE

For use on arched windows. Jamb bars are anchored to masonry.



IN NEW DESIGNS TO HARMONIZE WITH YOUR ARCHITECTURAL PLAN



Inconspicuous window guards, designed and finished in baked enamel paint in a color to harmonize with the architectural treatment of any modern office building, apartment house, industrial plant or other type of structure are now available made from Steelcrete Expanded Metal. Each guard consists of a section of expanded metal and frame, with hinges or other fixture for fastening to the building. A wide selection of meshes permits choosing a type of guard for protection against glass breakage, illegal entry or exit or damage due to thrown objects.

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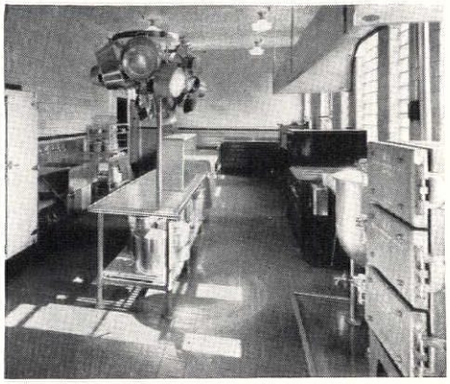

• • Planning the National Defense

When architects are called upon to plan new buildings for the production of essentials for the national defense program they realize that one of the most vital departments is that of

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for INDUSTRIAL WORKERS

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HEADWAY & HEADACHES

(Continued from page 82)

► This estimate was far too low. For lack of funds during past years and for lack of time last fall, the Army was forced to base its estimates on the cost-per-man of building several small camps during 1939 and early 1940. More accurate estimates would have required preliminary site surveys, utility layouts and building plans. As it was, many sites had not yet been selected, for the Army's much-touted M-day plans were based upon the supposition that the need would be for several large short-term basic training camps to prepare soldiers for embarkation to foreign training and battlefields as in World War I. Not until last summer did an aroused public opinion indicate that the Army would have to junk these plans, prepare for the long-term training of troops whose number this summer will reach the statutory maximum of 1.4 million.

► Material cost rises played a comparatively small part in the program over-run. Reports from local project architects, engineers and contractors show that framing lumber prices were the biggest bugaboo, advancing an average of 29 per cent between July 1 and the time of purchase at 35 projects. Sheeting came next, up 27 per cent. Other trouble-makers: millwork, up 13 per cent; electrical material, up 11 per cent; plumbing material, up 6 per cent.

► Another comparatively small factor behind the general cost boost was the change of construction plans (upon which the original estimates were based) to bring them in line with the most recent military developments. Size of 63-man barracks was enlarged; roofing materials were changed from black to mineral-coated red; wood post foundations gave way to concrete posts; termite shields were specified at the last minute; and the painting of all buildings was not decided upon until after the program got under way. Finally, organizational changes in the Army based upon European lessons increased its mechanization and required wider roads than originally contemplated, wider dispersal of buildings and more buildings for the storage and repair of equipment.

► Much more important cost-wise was the increase in quantity, size and degree of development of utilities. Due to the lack of adequate site surveys many unfortunate topographical and sub-soil conditions were encountered and with complete surprise—rock formations, running sand, swamps, deep ravines, etc. Moreover, the utility systems had to be varied considerably from those serving the 1939-40 camps on which the estimates were based. Thus, it was necessary to build 17 miles of railroad to serve one camp, a complete water system (dam, filtration and pumping plant, storage tanks, etc.) for another. At a third an

(Continued on page 86)

Compare

SPECIFICATIONS
Then You'll Know Why

Gar Wood

Gives Greatest Value and Best Performance

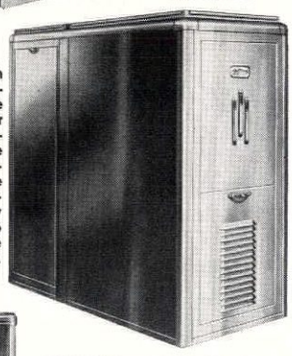
★ Today's highly satisfactory performance of Gar Wood home heating and air conditioning equipment is the result of accumulated engineering and practical field experience of many thousands of installations throughout the country, operating for more than a decade. Today, Gar Wood engineers bring laboratory efficiency into the home!

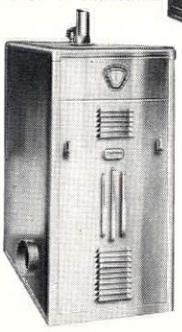
OIL-FIRED

The 1941 Tempered-Aire models are the latest editions of a long line of units distinguished for their phenominal fuel economy. Basically the design is identical to the original pioneer furnace-burner unit introduced by Gar Wood over a decade ago. This year a smaller model is available for lower cost homes.

GAS-FIRED

Nine models, both vertical and horizontal types, comprise the new 1941 Gar Wood line of gas-fired automatic home heating and air conditioning units. Three basic heating sections are used singly and in multiple to provide a complete range of capacities.





STEAM • HOT WATER

The 1941 Gar Wood Series "B" Boiler Units are of the internally fired, downdraft type. Combustion is completed within a fire bowl located at one end of the firebox. The hot combustion gases travel the length of the firebox, then reverse and re-travel the length of the boiler in the fire tubes. Offered in five capacities.

Write or Ask for Literature

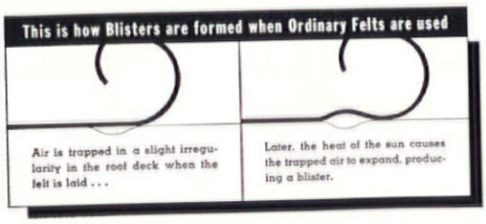
Bulletins illustrating and describing Gar Wood units furnished on request.

AIR CONDITIONING DIVISION
GAR WOOD INDUSTRIES, INC.
DETROIT, MICHIGAN, U.S.A. • *Canadian Distributors: Engineering Industries, Ltd., Toronto, Ont.*

J-M's 15-LB. *Perforated* ASBESTOS FELT

Today's newest roofing development... increases the efficiency of smooth-surfaced roofs . . . minimizes "Blistering" hazards!

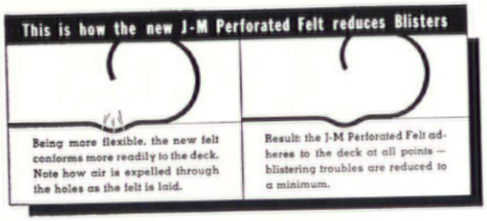
This is how Blisters are formed when Ordinary Felts are used



Air is trapped in a slight irregularity in the roof deck when the felt is laid . . .

Later, the heat of the sun causes the trapped air to expand, producing a blister.

This is how the new J-M Perforated Felt reduces Blisters



Being more flexible, the new felt conforms more readily to the deck. Note how air is expelled through the holes as the felt is laid.

Result: the J-M Perforated Felt adheres to the deck at all points — blistering troubles are reduced to a minimum.

LONG FAMOUS for fire-, weather-, wear-resistant built-up roofs, J-M now offers a new-type felt! It's the *Perforated Asbestos Felt* . . . and it increases roof service by reducing blistering hazards to a minimum.

As every architect knows, when laying conventional felts, "air pockets" are often formed. As the sun's heat causes the trapped air to expand, blisters result. The J-M Perforated Asbestos Felt is provided with millions of tiny perforations—"check valves" that open upward to allow trapped air to escape during application, but are completely sealed by the waterproofing asphalt when the roof is laid. Result: The Perforated Felt adheres closely to the roof deck . . . blistering troubles are minimized.

Specify this protection for all your clients. They'll appreciate the continued trouble-free roofing service J-M Perforated Asbestos Felts provide. For full details and specification data, write Johns-Manville, 22 East 40th Street, New York, N. Y.

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***Smooth-Surfaced* ASBESTOS BUILT-UP ROOFS**

THE ROOF WITH THE SAFETY FACTOR

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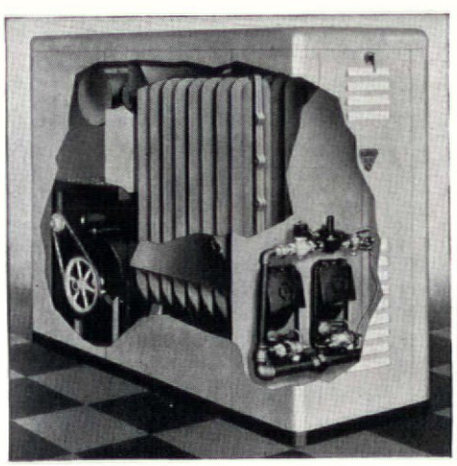
Even the Low Cost Home can have Automatic Heating

• Modern automatic winter air conditioners are now so reasonable in price and so simple to install that they are well within the limits of the low cost home budget. Besides, through the FHA or on dealers' deferred payment plans such equipment can be bought on remarkably easy terms.

RYBOLT automatic heating units are available in a wide range of designs in cast iron or steel, with coal, gas or oil as choice of fuel. Their efficiency and convenience are matched by their low operating cost. For homes in still lower price brackets RYBOLT gravity furnaces, fired by coal, gas or oil, will give dependable and economical heating performance.



RYBOLT CAST IRON GAS-FIRED

Winter Air Conditioner... Series CG

Completely new in design this RYBOLT cast iron gas-fired Winter Air Conditioner has many modern features which contribute high efficiency. Combustion chamber of durable gray iron castings of uniform thickness. Special flue economizer and scientific baffling promote economy of operation. Cabinet of smooth gray Hammerloid finish is inner-lined with a sheet metal baffle. Sturdy, simple and accessible to service. Compact neat design. 5 sizes.

Write for "The Complete Line" Folder

THE RYBOLT HEATER CO.
617 MILLER ST. • ASHLAND, OHIO

HEADWAY & HEADACHES

(Continued from page 84)

elaborate sewage disposal plant was needed to save the fish in a near-by stream.

► Labor costs comprised another unexpectedly big item. Reasons: the demand for speed and its attendant over-time, shift work and rapid expansion of labor forces. In the drive to get a project started, men were hired in droves and to keep it going were only fired for particularly serious inefficiency. Due to shortages of skilled mechanics, many unskilled men were assigned to higher jobs at the higher rates of pay, despite the fact that they were expensively inefficient. Moreover, the supervisory forces of contractors were too small, somewhat rusty with activity and, due to the widespread demand for supervisors, were difficult to expand in line with the sizes of the projects. And, of course, labor wages went up in many localities.

► Weather was another important cost-raising factor. When the original estimates were prepared, it was expected that construction would start in late summer. Instead, fall was the starting period, and cold winter weather and frozen ground upped costs in the north while torrential rains hampered progress in the South and California.

After hearing and studying Col. Somervell's testimony, Chairman Edward T. Taylor of the House Committee on Appropriations concluded: "Looking at the vast undertaking in the light of its magnitude of $1 billion of construction on more than 186 different projects in varied sections of the country, and to be completed in a very short time under all conditions of weather and topography, there is reason to praise the Army authorities for their accomplishments. It is easy to criticize and find fault, but fairness compels a bestowal of commendation for sincere, determined effort to do the best possible kind of a construction job under the worst possible conditions both as to expedition and cost."

Additional construction. Five big items account for most of the $236 million sought and received by the War Department for constructing projects not contemplated in the original program: 1) Chapels, $12.8 million — the Army apparently forgot about the religious life of its selectees or judged that recreation rooms and pianos would serve the purpose. But, its 1,250 new chaplains said "no", hence will get 604 new chapels and organs at about $21,220 a pair. 2) Reception and discharge centers, $20.7 million—another slip of mind accounts, perhaps, for the failure of Army estimators to include in their original totals the cost of buildings to care for the exodus of one-year trainees. Since reception centers will be continually used for the examination and outfitting of replacements, they cannot be used in reverse without confusion. 3) Recreational facilities, $17.0 million—principally outdoor athletic fields and equipment, officers' day rooms and mess halls and Red Cross recreation buildings for cantonment hospitals. 4) Access roads to training areas, $12.9 million—connecting links between camps and target ranges, drill grounds, manoeuver areas, etc.—20 and 30 ft. second class roads at about $15,000 per mile plus some WPA labor. 5) Air corps, $125 million—principally airfield grading, paving, lighting, etc., housing and depots for plane maintenance in connection with the expanded Air Force program.

Engineering surveys. Most significant item in the Army's entire $695 million appropriation was the $15 million covering the cost of engineering surveys on which the next cantonment construction program will be based. Since the allocation is $15 million and since engineering costs are figured at about 1½ per cent of a project's total cost, the appropriation is a very definite indication of what the War Department is expecting—another $1.5 billion cantonment construction program to provide accommodations for an army of twice the presently authorized size.

To be completed by mid-summer, the surveys will help the War Department in the future avoid the cost-upping mistakes of the past, will save an officially estimated two months and $100 million over the program now nearing completion. Said Col. Somervell last month in retrospect: "It would have been better, as I see it now, if we had ignored our desire to locate the 44th Division at Camp Dix (the only National Guard divisional camp in the heavy winter weather area—New Jersey) in the Northeast at an early date, and to have devoted the entire (cost) . . . to engineering surveys and basic utilities" for the program as a whole.

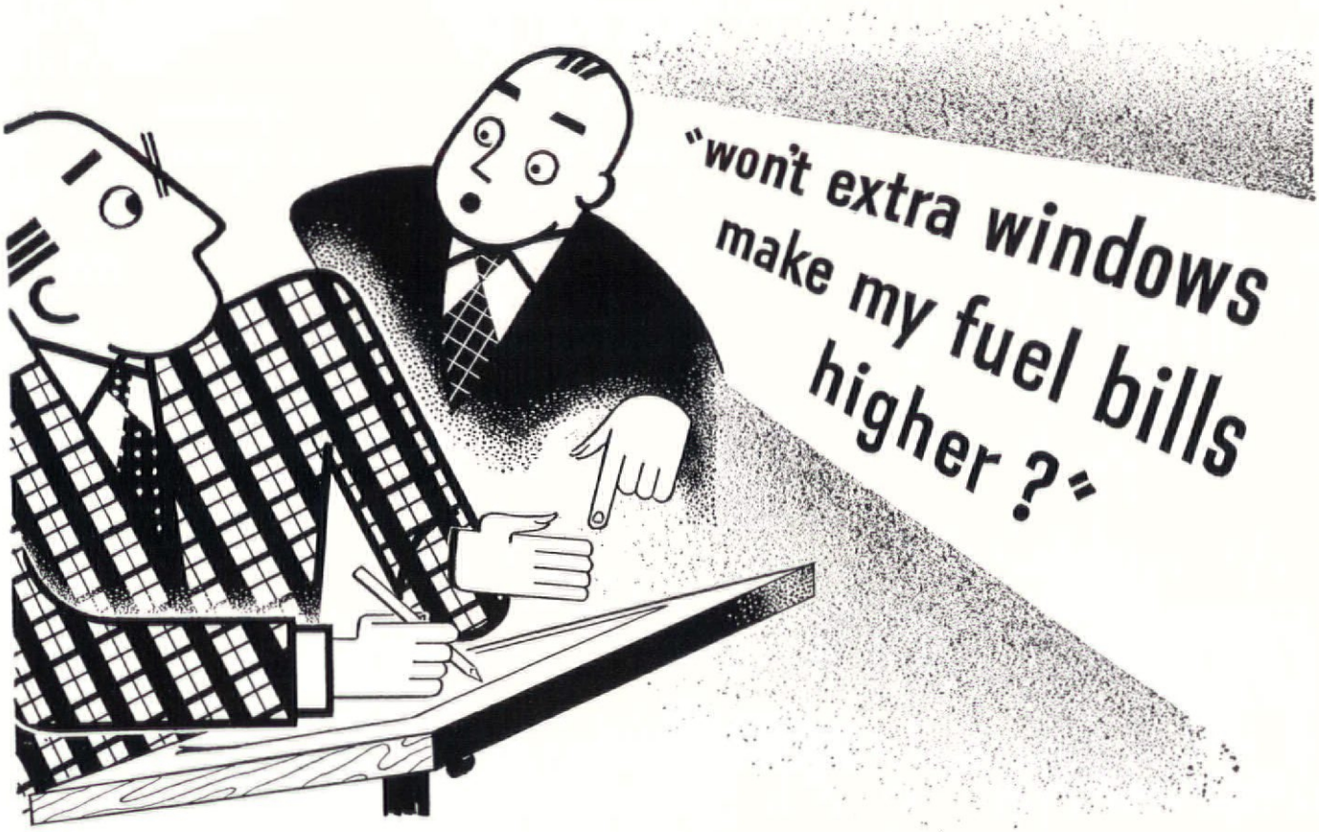
ARP

Ostensibly at peace, the U. S. is nevertheless considering the prospect of its being bombed by a foreign enemy. Thus, last month air raid precaution activities made headlines in four different communities.

► At Buck's Rock, Conn. the Children's Foundation Inc. last month opened an "evacuation center" to serve as an experiment in the care of school children who might be forced to leave New York City in case of war. A modern dormitory project of four two-story flat-roofed frame buildings (from the drafting boards of Designers Richard Bennett, Reinhard Bischoff and Donald Deskey), the center sleeps 125 children and fifteen supervisors in double-decker bunks. To put the experiment to test, 100 girls from New York's Dalton Schools have packed up their books and personal belongings, have been "evacuated" to the new center for a month's "protection." As in war time, their morale will be maintained by the planned absence of bombproof shelters. (It might have

(Continued on page 90)

HOW TO ANSWER THE CLIENT WHO *SAYS:*



● Your answer is easy! You simply say—"No! Not if we use Silentite 'insulated' windows!"

Using Silentite is the way to give homes plenty of light and air without making owners pay a penalty in excessive fuel bills and cold, drafty rooms. For Silentite makes possible the beauty and charm of greater glass areas without extra fuel cost. Its narrow mullions and Mitertite trim add to room beauty.

Curtis Silentite has a patented built-in weather-stripping that keeps heat in. It makes windows weathertight—yet they work easily in all kinds of weather. Owners say Silentite keeps their drapes, walls and rugs cleaner because dust and dirt don't sift in.

Silentite has eliminated another window "headache"—it won't jam, stick or rattle! Its sash glides smoothly in metal channels; its lifetime springs replace weights, pulleys and cords. It's a *trouble-free* window for all types of homes!

Silentite is "pre-fit"—it cuts installation costs, with Curtis Mitertite trim, as much as ⅔! Curtis has developed a handy "Calculator" to help you figure fuel savings with all types of wood windows, storm sash savings and window installation costs. Want one? It's free.

Curtis makes a complete line of architectural woodwork. The same high quality and lasting economy found in Silentite is true of all Curtis Woodwork, which has satisfied America's home builders for 75 years.

May we tell you all about our Silentite *wood* window family: double-hung, casement, circle window, and basement sash? Mail the coupon at once. If you live in Canada, write to W. C. Edwards & Co., Limited, 991 Somerset Street, West, Ottawa, Canada.

CURTIS WOODWORK IS SOLD BY RELIABLE DEALERS EVERYWHERE

When in New York, visit the Curtis Woodwork display at Architects' Samples Corporation, 101 Park Avenue.

OUR 75th YEAR

1866 CURTIS WOODWORK

SILENTITE PRE-FIT the "*Insulated*" window

THERE'S ONLY ONE SILENTITE AND ONLY CURTIS MAKES IT
Its patented features aren't available in any other window

CURTIS COMPANIES SERVICE BUREAU
Dept. AF-4, Clinton, Iowa

Send me a Silentite Economy "Calculator" and tell me more about these modern windows.

Name .....

Address .....

City ..... *State* .....

All those windows in a modern home were put there for a purpose . . .

LET Sunchek FABRIC VENETIAN BLINDS *preserve their function!*

YOU DO THIS WHEN THE BLINDS GET SOILED . . .

It's just as easy, and just as effective as washing curtains to tub SUNCHEK blinds in Lux or Ivory suds. They look like new.

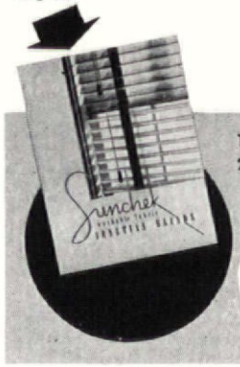
SMARTEN UP THE KITCHEN WITH THIS COLORFUL, PATTERNED BLIND . . . .

Miniature pots, pans and fruits handblocked in combinations of red, green or blue and black on a snowy white background. It'll "do things" for the kitchen.

YOU GET 4-WAY LIGHT AND VENTILATION CONTROL WITH THE PATENTED SUN - E - CLIPSE ADJUSTER.

You'll hear nothing but praise from the thousands of women who have SUNCHEK venetian blinds in their homes. They bought SUNCHEKS first because they admired their distinctive beauty . . . because they liked the cheerful, "toned" sunlight that filtered through the translucent fabric slats. Now, after those blinds have been in service for many months, they are discovering many plus values that hadn't even entered into their first consideration, such as — the ease with which SUNCHEKS may be cleaned . . . their four way control of light and ventilation . . . their noiseless operation . . . their inconspicuous bulk when "stacked" . . . and the surprising way those processed fabric slats resist every sign of wear. We have yet to see any venetian blind that has gained so many staunch, enthusiastic friends, in such a short space of time as SUNCHEK. You'll like them, too.

A copy of this booklet is yours for the asking. You'll enjoy reading it.



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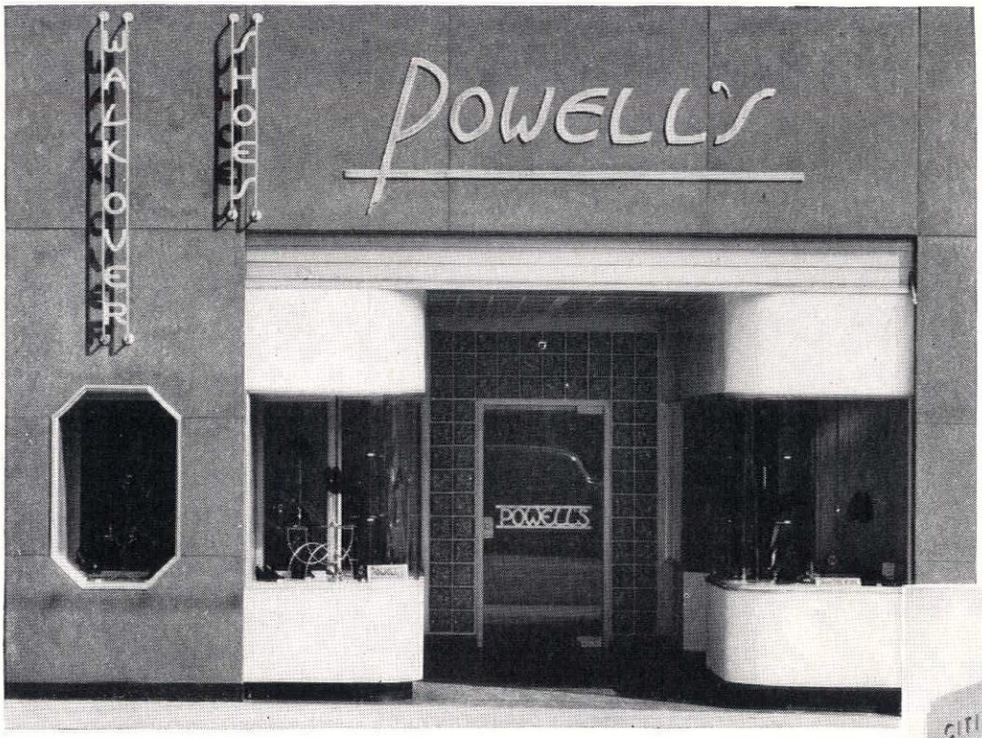
WILLIAM VOLKER & CO.
Main and 2nd Sts., Kansas City, Mo.

Name .....

Address .....

City ..... *State* .....

The Facing Itself Is Reinforced Concrete



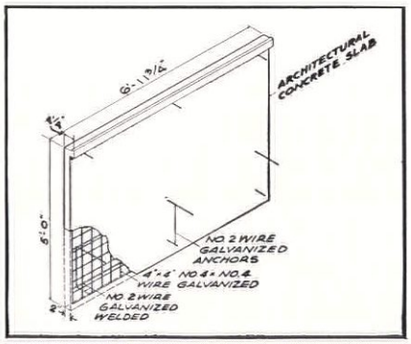
MODERNIZATION—Architectural Concrete Slabs used for remodeling Powell's Shoe Store, Greensboro, N. C. The slabs are of translucent quartz aggregate exposed in a dark green matrix made with Atlas White cement. The name, cast in the slab, is in 3/8" raised gold letters. Architect, C. C. Hartman: Slab Manufacturer, Arnold Stone Co., —both of Greensboro.

NEW CONSTRUCTION—Architectural Concrete Slabs lend dignity and prestige to the Citizens Bank, Conover, N. C. Base course, entrance jambs, and lintel are green granite slabs made with Atlas Lumnite cement. Balance is of Architectural Concrete Slabs made with light buff aggregates exposed in a matrix of Atlas White cement. Architect: Robert L. Clemmer, Hickory, N. C.; Contractor: Herman Sipe Co., Conover, N. C.; Slab Manufacturer: Arnold Stone Co., Greensboro, N. C.

Thin, precast Architectural Concrete Slabs, for new work and remodeling, combine strength of concrete and steel with permanent, colorful beauty of exposed aggregates

What are Architectural Concrete Slabs

Factory-made units, carefully following the architect's design, ranging up to and exceeding 100 sq. ft. in area, 20 ft. or more in length and usually 2" thick. High structural strength (7500 lb. per sq. in. or more) is due to factory fabrication, scientific proportioning, low water-cement ratio, vibration, heavy galvanized welded reinforcing, and careful curing. Textures and permanent colors are the result of exposing selected aggregates—quartz, marble, granite, ceramics, or vitreous enamels—in a matrix of Atlas White cement.



Advantages in New Construction

With Architectural Concrete Slabs the architect may secure economically the color and texture desired, increase the scale and character of the design, and provide the dignity and permanence of large scale units. Their large sizes and varied shapes reduce the number of joints and flashings. Their thinness, light weight, and large size make erection easy and economical.

Advantages in Remodeling

Slabs, quickly and economically anchored in place to old masonry walls, improve property appearance and values. Their relative thinness (usually 2") often permits use without ripping off the front of old building to keep within the building line.

ARCHITECTURAL CONCRETE SLABS—like this spandrel—may be of any size and shape desired. Reinforcing mesh gives the slab structural strength. Note anchor clips welded to the embedded mesh and used for handling and for anchoring the slab during installation.

▶ Write for more information on this modern material for new or old buildings. Universal Atlas Cement Co. (United States Steel Corp. Subsidiary), Chrysler Bldg., N. Y. C. Offices: New York, Chicago, Philadelphia, Boston, Albany, Pittsburgh, Cleveland, Minneapolis, Duluth, St. Louis, Kansas City, Des Moines, Birmingham, Waco.

AF-ACS-30

ARCHITECTURAL CONCRETE SLABS

MADE WITH ATLAS WHITE CEMENT

ATLAS WHITE

HEADWAY & HEADACHES

(Continued from page 86)

been better maintained had not the women sponsors of the project ordered many of the site's camouflaging trees to be cut down—see photograph, right.) At mid-month, Miss Helen Parkhurst, head of the Dalton Schools and one of the Foundation's mainstays, announced on page one of the New York *Herald Tribune* that the "evacuation" experiment was going "extraordinary well" and that her girls "are having a grand time."

► Meanwhile the Associated Press told New Yorkers who are less fortunate than the evacuated school girls that they might find air raid protection in the 40,000 underground vaults which honeycomb Manhattan Island. It seems that the early Dutch settlers dug the vaults for burial and other purposes, and their usefulness was not rediscovered until 1933 when the City decided to add to its revenues by requiring their owners to pay a license fee for the "excavations." Forthwith, WPAsters were ordered to chart the caverns, and, based upon their findings, the City sent out bills totaling $450,000. (To avoid the fee, many property owners have since filled in the vaults.) About 20,000 potential air raid shelters have been discovered and mapped—some of them extending under city streets, some of them 60 ft. deep, all of them averaging 6 ft. deep—and hunch is that there are at least 20,000 more yet to be uncovered by the continuing search. At February's end Borough Works Commissioner Walter D. Binger announced that he would study the air defense aspects of the strange WPA project.

Acme

Buck's Rock "evacuation center"

► Detroit's ready-made "bombproof"—big enough to accommodate the city's entire population of 1.6 million—is a 20-mile-long salt mine hidden 1,100 ft. below the automobile center's streets. Scale of the hole is indicated by the fact that trucks move along its corridors, 40-ton power shovels eat at its walls and a bewildered miner once made a wrong turn and was lost for thirteen days. But, before the 37-year-old mine (the country's second largest) can serve ARP purposes, one tough problem must be solved—although International Salt Co. is able to lift from 1,200 to 1,800 tons of salt per day through the mine's two access shafts, the elevators would have difficulty taking more than 100 persons per day to the refuge.

► Apparently besieged by requests for ARP data, the War Department month ago publicly announced that it had no printed material to offer, suggested that inquirers peruse scientific English and Canadian documents many of which are available for reference in the British Library of Information in New York City (ARCH. FORUM, Nov. 1940, bibliography, p. 15).

"OK" INSTEAD OF "Giddap"!

THE MONEY YOU SAVE WITH THESE MODERN FORM TYING METHODS—"AIN'T HAY"!

RICHMOND 10-WAY PROFIT PLAN

1—Over 58 different form tying devices to choose from.
2—Always cost less to use than wire, band or rod ties.
3—Engineered for safe working loads of 1500 to 25000 lbs.
4—Faster erecting and stripping plus big lumber savings.
5—Promotes perfect alignment for correct wall thickness.
6—Protects job against rust staining with "1 to 2" "hold-back."
7—Scientifically reduced weight, saves shipping and handling costs.
8—Only known prevention against termite destruction.
9—You borrow working parts paying only for ties in the job.
10—Free estimating service specifying job quantities needed.

No question about it, your horse-drawn dirt-cart moved a lot of stuff in it's day. Yes, and a lot of concrete form work is still being done today in a way that's just as old fashioned and costly. How about yourself? Bet you we can show you a couple of money-making angles you've missed.

Every time you even think about a concrete job without thinking of Richmond, you're letting a lot of dollars slip through your fingers. Take a tip from thousands of contractors and rely on Richmond. What's it get you? Look at our 10-way profit plan! You're bound to profit. Big, too!

FREE ESTIMATING SERVICE

By 15 especially experienced engineers to tell you exactly how many ties are needed, what kind, how to do the job fast for extra profit. Plus 9 other "profit-savers" features in our 10-way profit plan.

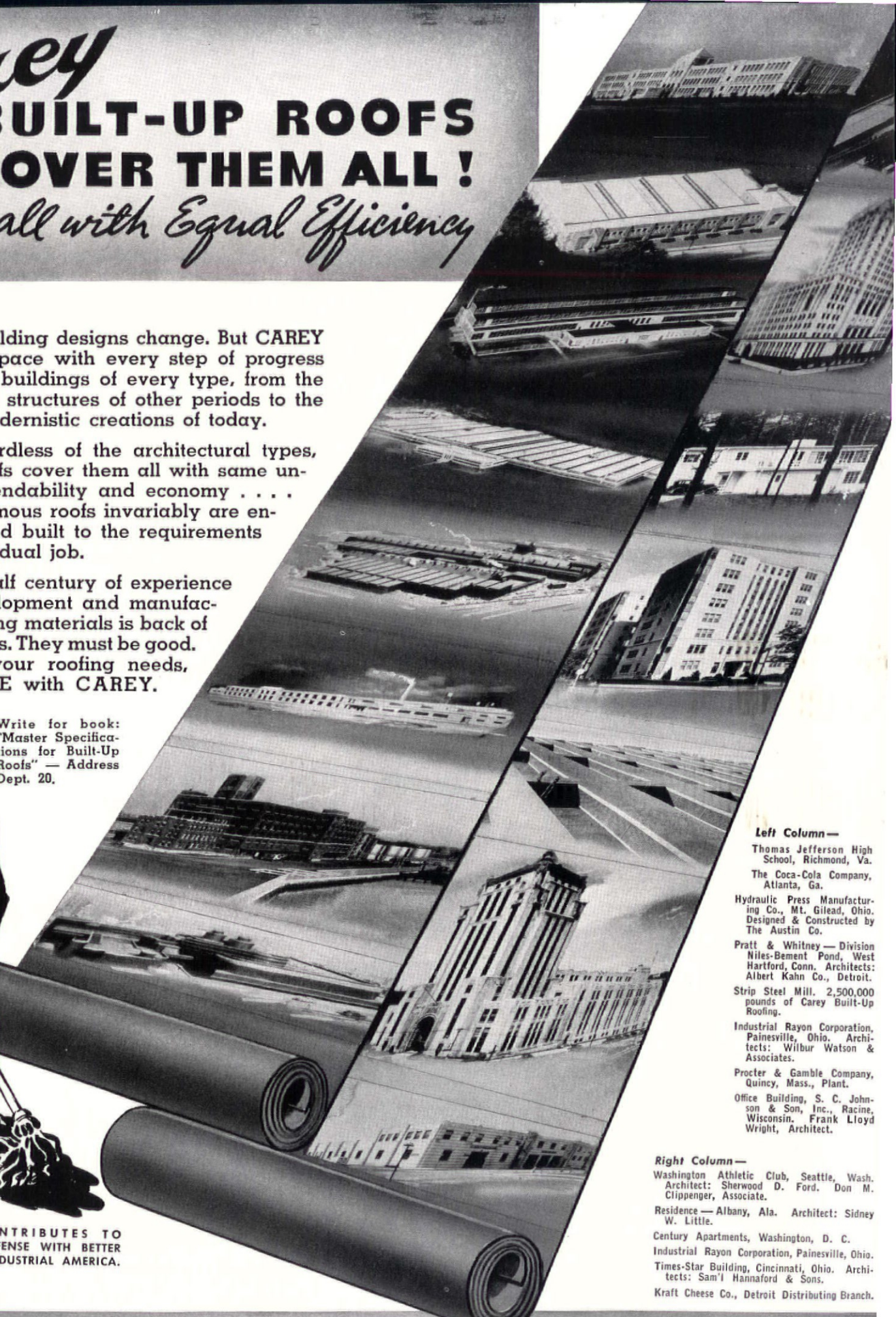
For complete product information see our pages in Sweets Catalog Engineering & Contractors and Architectural Sections or write direct to Dept. D

RICHMOND SCREW ANCHOR COMPANY, INC.
816 LIBERTY AVENUE • BROOKLYN, NEW YORK

TIME AND LABOR SAVING CONSTRUCTION DEVICES FOR CONCRETE CONSTRUCTION

Carey BUILT-UP ROOFS COVER THEM ALL!

Serve all with Equal Efficiency



Building designs change. But CAREY Roofs keep pace with every step of progress . . . . cover buildings of every type, from the time-scarred structures of other periods to the massive, modernistic creations of today.

And regardless of the architectural types, CAREY Roofs cover them all with same unfailing dependability and economy . . . . for these famous roofs invariably are engineered and built to the requirements of the individual job.

Over a half century of experience in the development and manufacture of roofing materials is back of CAREY Roofs. They must be good. Whatever your roofing needs, you're SAFE with CAREY.

Write for book: "Master Specifications for Built-Up Roofs" — Address Dept. 20.

CAREY CONTRIBUTES TO NATIONAL DEFENSE WITH BETTER ROOFS FOR INDUSTRIAL AMERICA.

Left Column—

Thomas Jefferson High School, Richmond, Va.

The Coca-Cola Company, Atlanta, Ga.

Hydraulic Press Manufacturing Co., Mt. Gilead, Ohio. Designed & Constructed by The Austin Co.

Pratt & Whitney — Division Niles-Bement Pond, West Hartford, Conn. Architects: Albert Kahn Co., Detroit.

Strip Steel Mill. 2,500,000 pounds of Carey Built-Up Roofing.

Industrial Rayon Corporation, Painesville, Ohio. Architects: Wilbur Watson & Associates.

Procter & Gamble Company, Quincy, Mass., Plant.

Office Building, S. C. Johnson & Son, Inc., Racine, Wisconsin. Frank Lloyd Wright, Architect.

Right Column—

Washington Athletic Club, Seattle, Wash. Architect: Sherwood D. Ford. Don M. Clippenger, Associate.

Residence — Albany, Ala. Architect: Sidney W. Little.

Century Apartments, Washington, D. C.

Industrial Rayon Corporation, Painesville, Ohio.

Times-Star Building, Cincinnati, Ohio. Architects: Sam'l Hannaford & Sons.

Kraft Cheese Co., Detroit Distributing Branch.

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Dependable Products Since 1873

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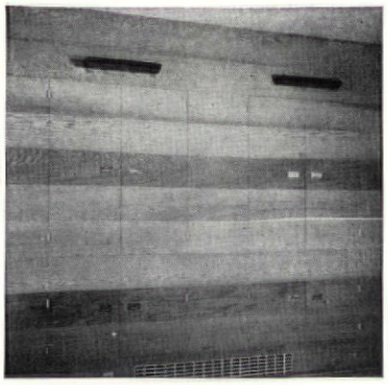
Whatever the job . . .

Consider Redwood

Testing laboratories, architects, engineers and builders rate Redwood at or near the top in this combination of 8 essential points:



Stay-put Qualities: Forest Products Laboratory lists Redwood as having lowest volumetric shrinkage of U. S. commercial woods. Certified Dry Grades assure correct dryness for your locality.

Durability: Among the most durable of all woods. Classed as "durable even when used under conditions that favor decay".

Easy Workability: Even textured grain permits smooth milling and sawing, takes nails and screws close to edge, making neat, tight joints easy.

Architectural Adaptability: No material can take a greater variety of surface finishes. No lumber offers a greater number of siding patterns.

Beauty: Its mellow "sunshine" tones reflect the beauty of captured sunlight. Beautiful grain patterns . . . a wood you can live with.

★ ★ ★ ★

Paintability: Forest Products Laboratory classes Redwood among those woods which "hold paint longest . . . ". Experiments show up to forty per cent saving on paint maintenance.

Economy in Use: High resistance to decay, weather, shrinkage assures long life. Lenders carrying long mortgages often insist upon Redwood specifications.

Insulation Value: One inch of Redwood equals eight inches of non-cellular materials in preventing heat loss. University of Minnesota tests place Redwood among the woods highest in insulating value.

Redwood is the ideal wood for:

Siding	Structural Timbers	Gutters
Interior and Exterior Trim	Mud Sills	Mouldings
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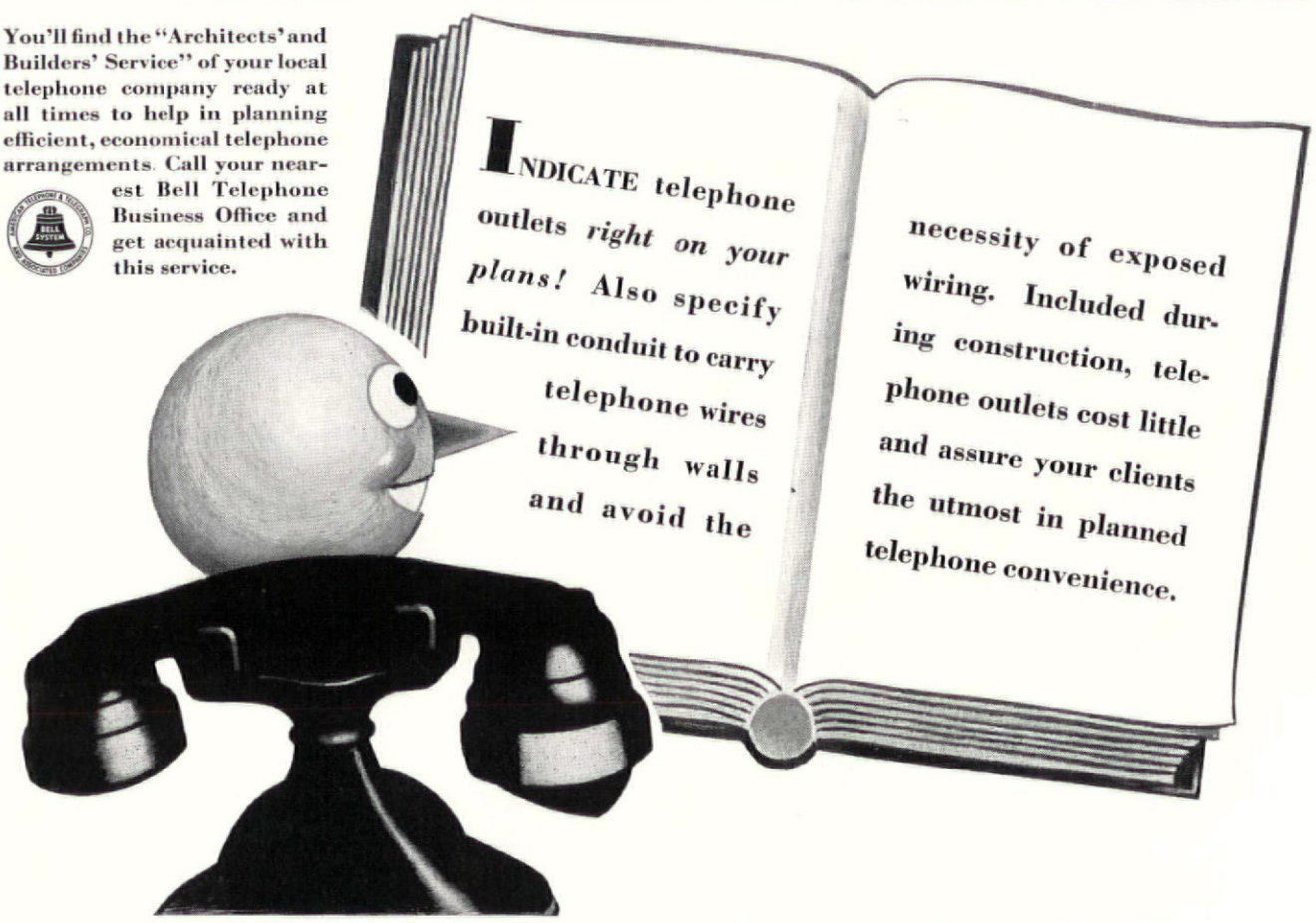
Standard patterns of above Redwood products are available at most distribution points. If you can't obtain Redwood easily please write, we will tell you how to get it. Send for architectural data on Redwood.

California Redwood Association, San Francisco
Also offices in New York City, Los Angeles

Illustrations above show natural finish china cupboard of Redwood in home designed by John Funk, Architect.

★ ★ ★ ★

You'll find the "Architects' and Builders' Service" of your local telephone company ready at all times to help in planning efficient, economical telephone arrangements. Call your nearest Bell Telephone Business Office and get acquainted with this service.



Restyling with Paint

To Meet The Nation-wide Color-styling Trend, Architects Are Specifying Proper Modern Color Combinations — In Pittsburgh Paints

TODAY, alert architects throughout the country are realizing more than ever before the unlimited possibilities of "Restyling with Paint." For they know that properly chosen colors can make a small house appear more spacious; a large, cold home look more comfortable, more inviting; can cause long, narrow rooms to seem wider, dark rooms to seem brighter. They know, in short, the importance of color-styling.

They know, too, the economy of specifying top-quality finishes with colors *always* uniform . . . with viscosity, spreading, hiding, *always* the same. That is why so many of these architects are specifying Pittsburgh Paints.

"Style Right" Finishes

The Pittsburgh Plate Glass Company has been manufacturing fine paints more than 82 years. Through exact scientific control, rigid testing, constant checking and rechecking, a complete line of quick-drying, long-lasting finishes has been developed which enable the architect to accomplish *any* desired effect with a minimum of time, labor and cost.

So, in specifying paint, say "Pittsburgh Paint" and be *sure* of lasting satisfaction. Your clients will appreciate the recommendation of these nationally advertised, internationally known finishes.

See Sweet's Catalog

Look for the Pittsburgh section in Sweet's Catalog. Here you will find a complete list of all the Pittsburgh Branches. Ask for a representative to call. He may be able to help you with difficult or unusual conditions. Pittsburgh Plate Glass Company, Paint Division, Pittsburgh, Penna.

Copr. 1941 Pittsburgh Plate Glass Co.

PITTSBURGH PAINTS

WALLHIDE • FLORHIDE • WATERSPAR • SUN-PROOF

Smooth as Glass

PILOT TRAINING CENTER

(Continued from page 16)

deemed necessary. Construction was begun immediately on additional facilities. At year's turn incoming classes were increased to 120 cadets arriving every five weeks and staying for ten weeks of training.

As it now stands, neatly crystallizing a plan pattern that anticipates still other short-notice expansion demands, the Hemet training base comprises:

► Three hangars, each 100 x 150 ft., with lean-to additions housing the flight instructors' lounge, cadet locker rooms and showers, parachute storage and loft, stockrooms, shops, plus an office for the flight dispatcher and flight clerk. Hangar construction: wood trusses, composition roofs, sheet metal siding, 4 in. concrete floors.

► An administration quadrangle, open at one end, with two office buildings (one for Ryan bigshots, the other for Army brasshats), an Army medical unit, two classrooms and six laboratories arrayed along the other three sides. Construction: California redwood siding, oak floors.

► A kitchen, mess hall, cadet lounge and canteen—all compactly clustered in a single 50 x 180 ft. building. Equipped to serve 425 persons, the kitchen includes three ranges, bakers' oven, electric dishwasher, large refrigerators. Mess hall feeds 200 cadets at a sitting, and additional facilities are provided for an officers' mess and a public canteen. Measuring 42 x 70 ft., the cadet lounge boasts such comforts as a piano, radio, pingpong table, desks, reading lamps, and soft lounge chairs.

► Most interesting architecturally, a triangular grouping of 30 unit-type barracks. Each unit houses eight cadets, is divided into twin 4-man apartments. Thoroughly standardized, each section has its own bath, complete with tub, shower, toilet and lavatory. Two dressers, two study tables, two double bunks—all finished in traditional California Monterey style—comprise each apartment's furnishings, along with chairs and other necessary equipment. Ample closet space is provided for the cadets' personal clothing.

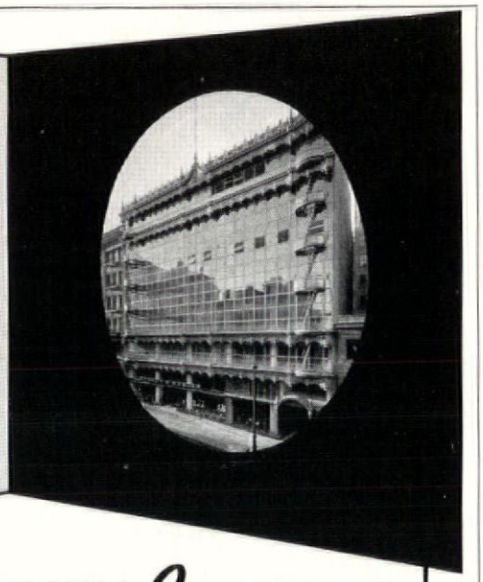
Hemet Valley's relatively hot summer air and low humidity make some sort of air conditioning imperative. So-called "desert coolers" are therefore installed in the offices, classrooms, mess hall and hangars. With these, the dry outside air is sucked through moist paddings, then distributed inside the buildings. Temperatures, it is reported, can be lowered as much as 20 degrees. For further atmospheric control all buildings have picturesquely wide roof overhangs, insulated walls and high ceilings.

The barracks units are not air conditioned, but with 722 cu. ft. of air rationed to each cadet and ample cross ventilation they are fully satisfactory. For chill days, each cadet apartment has its individually operated gas space heater. Each barracks unit also has its own hot water heater.

Anent utilities, water constituted the school's main problem. The first well dug proved insufficient, required a second 294 ft. deep. To provide an ample supply of butane gas for cooking and heating, a 4,000 gal. tank is on tap. Vaporizer and pressure regulators are operated at natural gas pressures so that all facilities may be easily converted if natural gas becomes available. The sewage problem was solved by installing four large septic tanks—one each in the hangar, administrative, mess hall and barracks areas.

Aside from its architectural virtues, the new Ryan school offers natural advantages which make it a favored feeder of fledgling pilots into the Air Corps' advanced training centers. High mountains bound an area of some 400 sq. mi. cut by small hillocks and ridges in just sufficient number to provide choppy air when needed for training students to handle planes in all kinds of weather. Hemet Valley's vast plateau also provides a convenient system of auxiliary landing fields. Boon, too, is fact that the Valley is free from heavy air line traffic. With all these assets stacking high in its favor, it would be scant wonder if Ryan gets orders to multiply itself still further to accommodate still more cadets.

in 1918 an Architectural Sensation



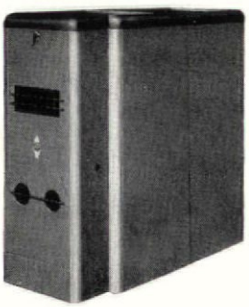
HALLIDIE BUILDING, *San Francisco* . . . The first all-glass (flush) front. Designed 23 years ago by the late Willis Polk. ☆ Named for the founder of San Francisco's cable lines.

...AND EVEN THEN *Payne* WAS A VETERAN IN GAS HEATING

Important to you is this fact: Year after year after year, PAYNE has concentrated on doing one thing superlatively well—the design and manufacture of *gas* heating equipment. ☆ When you specify PAYNEHEAT you back your own judgment with a reputation, a product, nationally accepted with absolute confidence. ☆ The reasons for this leadership will be instantly apparent when you check with your Gas Company or PAYNE Dealer. ☆ See Sweet's or Western States AEC Catalog. And write for our convenient AIA file.

FOR FURTHER INFORMATION SEE OUR CATALOG IN SWEET'S

Illustrated, the PAYNE Zoneair. *Also:* Forced Air Unit • Floor Furnace • Duplex furnace • Modern Console • Spacesaver Unit • Gravity Furnace.



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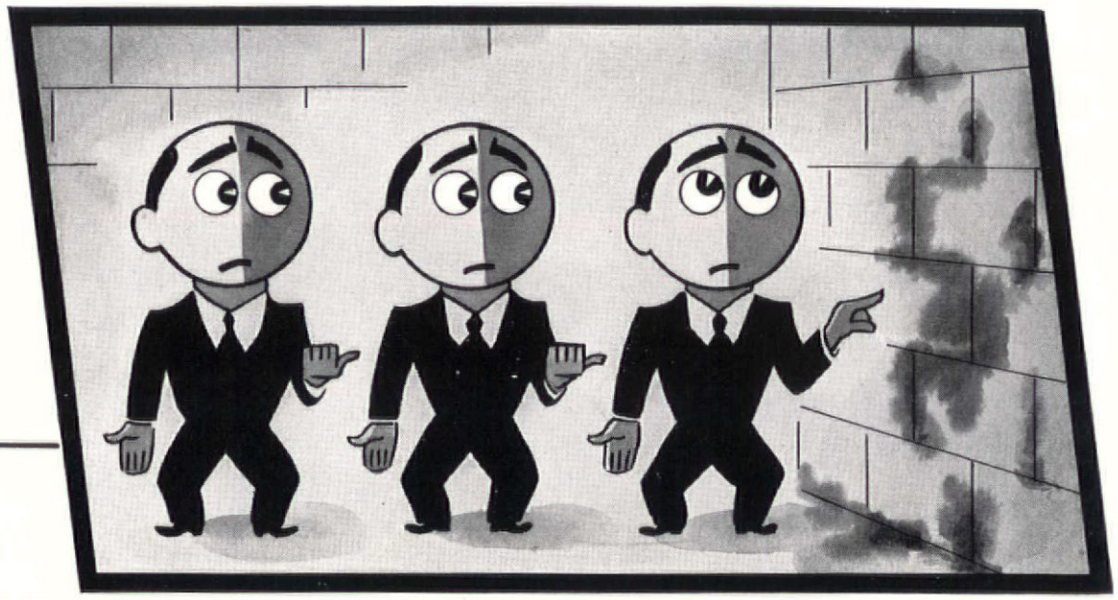

Who's to Blame
FOR DAMP BASEMENTS

ARCHITECTS? CONTRACTORS? SUB-CONTRACTORS? ACT OF PROVIDENCE?

● Whom shall we blame for so many damp basements? The architect who specifies an inefficient waterproofing material or fails to specify any? The general contractor or concrete contractor? Or is it providence? Let's don't blame anyone.

Our interest, and yours as an architect, is to prevent damp basements in the future, not to place the blame. It is quiet evident that oldtime specifications for basements are not enough. If they were, countless homes and business and industrial buildings wouldn't have damp basements today. Consequently our interest is in—

HOW TO PREVENT DAMP BASEMENTS. The specification of Medusa Waterproofing—Medusa Waterproofed Gray Portland Cement or if not available, Medusa Concentrated Waterproofing Paste or Waterproofing Powder—to be used in all concrete and mortar and as a plaster coat, prevents damp basements. These waterproofings line the pores of the concrete or mortar with a waterproofing material that repels all water at the surface. Medusa Waterproofed concrete and mortar are used like ordinary concrete and mortar and their cost is only slightly more than unwaterproofed materials. Owners are glad to pay this slight difference for the protection of permanently waterproofed basements and walls. Send the coupon below for a copy of the book, "How To Make Good Waterproofed Concrete."

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Medusa Products are also made in Canada by Medusa Products Company of Canada, Ltd., Paris, Ont.

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Gentlemen: Please send me a copy of the book "How To Make Good Waterproofed Concrete."

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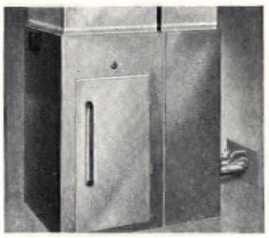
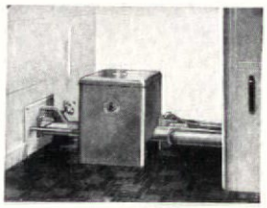
Don't Saddle New Homes With High Fuel Costs

Save with Iron Fireman Modern Automatic Coal Heat . . .



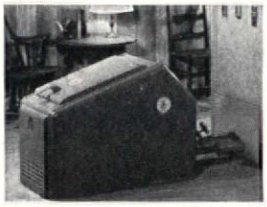
Complete AUTOMATIC Winter Airconditioner . . . $389.50*

Feeds coal from bin! Contains built-in Iron Fireman stoker; steel furnace; filters; humidifier; forced circulator.



Coal Flow $226* up

No coal handling. The famous Iron Fireman *Coal Flow* stoker "pipes" coal from enclosed bin.



Standard $179.50*

Adds only about $1.25 to $1.50 a month on average FHA terms!

You can give your clients "*more house*" when you build for *low operating cost.* For example, if you install equipment that cuts operating costs $5 a month, then the family can add this $5 to its FHA payments . . . and get an *extra $850 to pay for a* bigger, better-equipped house.

The biggest reduction in operating costs, in most areas, can be made by installing Iron Fireman automatic coal heating instead of burners using more costly fuels.

National Advertising Tells Value of "Low-Operating-Cost" Home

The public is responding to architects who provide for low operating costs. National advertising is steadily increasing public acceptance. See the Iron Fireman advertisements in the *Saturday Evening Post, Better Homes & Gardens, American Home,* and other leading publications. Send for free copies of consumer folder, "How to Build or Buy a Home for Low Operating Costs." Use this folder in talking to clients.

*All prices include automatic controls. Plus freight and installation. All models available for both bituminous and anthracite firing. (Prices slightly higher in Canada).

IRON FIREMAN
Automatic Coal Stokers

FREE . . . Free Copies of Folder for Your Clients.

IRON FIREMAN MANUFACTURING CO. Portland, Ore.; Cleveland; Toronto.
Mail to: 3136 W. 106th Street, Cleveland.

☐ Send me_____copies of "How to Build or Buy a Home for Low Operating Costs."—No obligation.

☐ Send data on Iron Fireman stokers for new homes.

*Name*_____

*Address*_____

*City*_____

WHEREVER toilet room traffic is heavy and usage severe, you're sure to find Whale-Bone-Ite Closet Seats. You will find they've been in service for years—five, ten, twenty, and more—and still look new! Don't be surprised when building managers say they haven't spent a penny for repairs of Whale-Bone-Ite Seats since installed. We have never heard of one wearing out!

COST NO MORE THAN OTHER HEAVY-DUTY SEATS

Any wonder Whale-Bone-Ite Seats are preferred for hotels, hospitals, schools—in all types of public and commercial buildings. They don't warp! They withstand severest abuse! They can be cleaned with strong disinfectants without harming their lustre.

EASY TO CLEAN—ALWAYS LOOK NEW

Molded of hard, resilient ebony plastic with a strong laminated wood core, Whale-Bone-Ite Seats have no surface coating to wear off. They're solid and smooth all over—moisture-proof—easy to clean, comfortable to use.

There is a suitable Whale-Bone-Ite Seat for every construction project on your boards. Refer to your Sweets Service for specifications—or, we will gladly send a complete catalog on request.

Brunswick

WHALE-BONE-ITE CLOSET SEATS

THE BRUNSWICK-BALKE-COLLENDER CO.
623 South Wabash Avenue, Chicago, Illinois
MAKERS OF FINE CLOSET SEATS FOR EVERY INSTALLATION

IRON and STEEL
SHOULD BE
BONDERIZED

IT IS EASY to write "Bonderized" into the specifications for steel building equipment, but rust is hard to explain away when the owner complains about it.

It is always more satisfactory to everyone concerned if Steel Windows, Air Conditioning Equipment, Radiator Covers, Bath Room Cabinets, and other steel units are Bonderized before finishing. Bonderizing holds the paint, and the effects of moisture and rust are defeated.

Bonderizing has been protecting America's finest products for many years. It is accepted by many industries as one of the most effective finishing methods. It saves refinishing costs and is a positive economy for the builder.

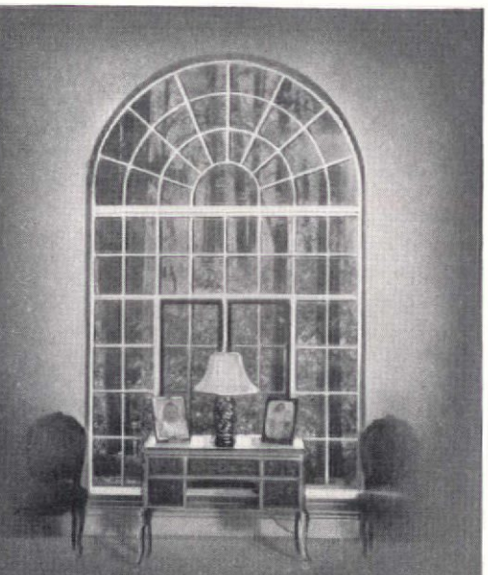
PARKER RUST PROOF COMPANY

2180 E. Milwaukee Avenue, Detroit, Michigan

PARKER *Processes* **CONQUER RUST**

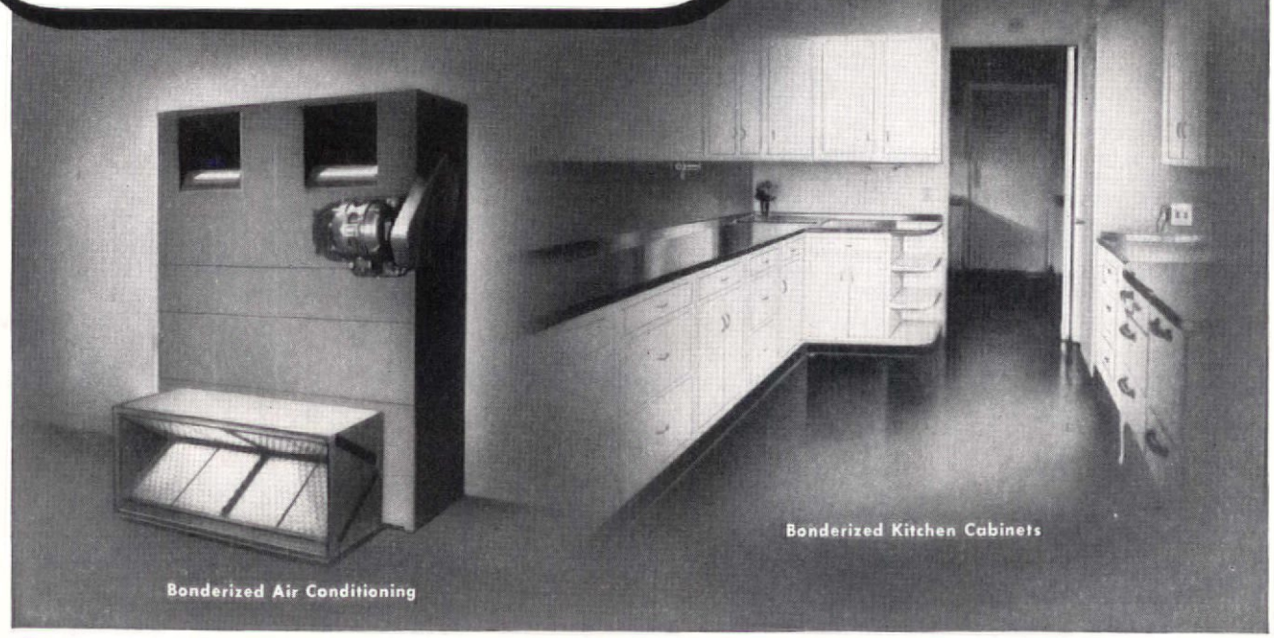
BONDERIZING · PARKERIZING

SEND FOR THIS BOOK: *It gives you the information you want about Parker Processes, and tells how they are serving the building industry by protecting iron and steel building materials from rust.*



Bonderized Steel Windows

Bonderized Radiator Cabinets



Bonderized Air Conditioning

Bonderized Kitchen Cabinets

HOUSING PROPOSALS

(Continued from page 18)

time to fight out that battle. Defense is in a hurry, and at best it will not get into full swing any too soon."

Those sentiments are admirable. But the Coordinator has not yet started to apply them.

Third Failure: Private enterprise is still unwilling to build defense housing.

In spite of all the coddling given it, and after seven months of talk about its "major role," private enterprise has proved a complete flop in providing defense housing, just as it did in 1917-18. The reason is the same—because there is too much risk involved. Which should have been just as obvious before the event. There is no mystery about it.

Asked for information as to the number of units of defense housing being built so far by private enterprise to compare with the number being built by Government agencies, which he publishes weekly, the Coordinator replied that "A large proportion of defense housing is of this emergency character and *therefore beyond the reach of private builders.* (italics ours). That is one of the main reasons we drafted Title VI of the National Housing Act. We felt this financing medium would encourage a great many more private builders to supply the defense housing market and thereby take up more rapidly the lag in fulfilling the needs of the country and of the workers. . . . Of course, there is no way we can force private enterprise to supply housing, and if they feel they are unable to take the risks to be incurred from attempting to supply this market, we will of necessity have to go in and construct the units with public funds."

He encloses a recent FHA report on new homes started all over the country under its Section 203 in the under $5,000 class, showing numbers started July-December 1940 as compared with the second half of 1939 and January-February 8, 1941 as compared with the previous year. The trend is upward as it has been for several years, but there is nothing to indicate that the last increases are due appreciably to defense needs.

The Coordinator's summary report of February 26 shows that as of that date, funds had been allocated to Government agencies for 68,612 housing units, of which 37,036 were under contract and 2,315 completed.*

Federal Works Agency reports, going into more detail, show USHA with a head start, Navy and PBA not far behind. They and several other agencies are functioning under the Federal Works Administrator smoothly and efficiently. They could unquestionably expand their present scale of action as fast as Congress makes funds available if permitted by the Coordinator. At present it is his policy to hold everything possible in abeyance until Congress passes the Title VI amendment in the hope that it will miraculously galvanize reluctant private enterprise into activity.

Fourth Failure: To grasp the principle that risks too great to be incurred by private enterprise are too great to be unloaded on individual workingmen.

A corollary is that defense housing should be rental housing. Workingmen interested in home ownership would be wise to bank their savings until the emergency is over and they find where their permanent jobs are likely to land them—if they are lucky enough to have permanent jobs.

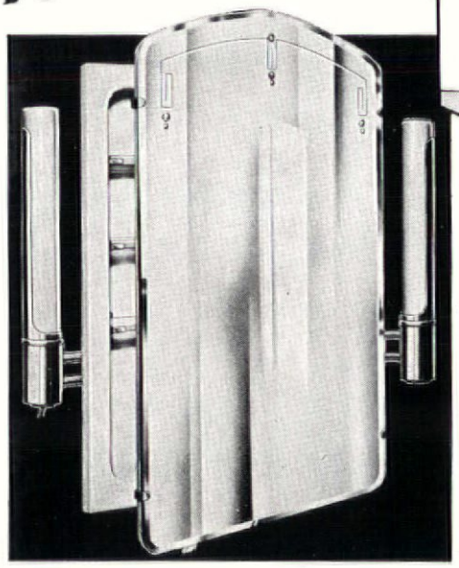
The Title VI amendment of FHA's National Housing Act impresses the writer as one of the most cynical bits of legislation ever penned. It takes all the risk out of speculation for the speculative builder. It insures the careful banker against loss in lending mortgage money to the speculative builder. The risk is then divided between Uncle Sam and the workingman.

Advocates of the measure admit that the foreclosure rate will probably be abnor-

(Continued on page 102)

* For an explanation of these seemingly healthy statistics, see p. 14, cols. 2 & 3.—Ed.

ARCHITECTS!
Here's YOUR Seal of Protection



125 YEARS OF QUALITY
Lawson

— Now You Can Specify

TIME PROOF ALL-PORCELAIN FINISHED CABINETS
(With or Without Tubular Sidelights)

At Baked Enamel Price Levels!

FOR a century and a quarter the name Lawson has been coupled with metal products of "High Quality at Popular Prices."

Zealously, we have guarded the reputation of our good name and of the good will we enjoy from architects and builders.

Never, even in our low-priced baked enamel line, have we compromised with quality. And today, as we commemorate our Century and a Quarter of Progress with a complete line of vitreous porcelain enamel cabinets for every size bathroom, we pledge you the perpetuation of our policy of high quality at moderate prices. Thus, you will continue to render your clients a greater service by specifying Lawson.

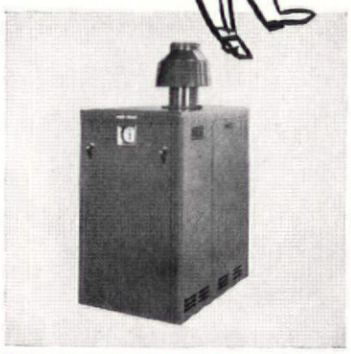
For details and prices of this complete Century and a Quarter Anniversary Line—look in the 1941 Sweet's, Section 27, Catalog 84—or without obligation, write for AIA File 29il—today.

THE F. H. LAWSON COMPANY
Bathroom Cabinet Division, Cincinnati, Ohio

World's Largest Builders 125 YEARS OF QUALITY Lawson of Bathroom Cabinets

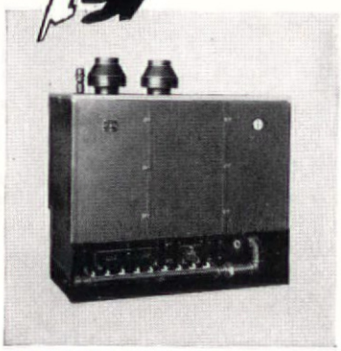
SOLD EXCLUSIVELY THROUGH WHOLESALE OUTLETS

"You say 23 different capacity G-E Gas boilers to choose from!"



FOR AVERAGE RESIDENTIAL INSTALLATIONS there are 8 sizes for steam or vapor systems, with capacities from 76,000 to 345,000 Btu output per hour.

ALSO: 8 boilers for hot water systems with capacities from 76,000 to 345,000 Btu per hour.



FOR COMMERCIAL, INDUSTRIAL or exceptionally large residential applications there are G-E gas furnaces in 15 sizes with capacities ranging from 422,000 Btu per hour output to 1,372,000 Btu per hour. These furnaces may also be used in multiple installations.

"What else is unique about G-E Gas Furnaces besides the fact that you have a unit to fit each and every capacity requirement?"

PLENTY!

Here are four major requirements you and your client can depend upon when you turn to General Electric:

- G-E units' installation cost is low.
- G-E units require little or no service.
- G-E units' controls are easily accessible.
- G-E units are easy to adjust.

A few of the General Electric advancements in design follow: Dependable and positive operation by combining gas regulator, snap-action valve, solenoid valve and throttling steam, vapor or water limit. Pilot valve allows gas supply to pilot to be controlled independent of Main Line Valve. Thermostatic Safety Pilot designed to provide maximum safety by shutting off gas supply if pilot light is not burning.

You will want to know the complete story on G-E Gas Furnaces—and other products in the G-E line. Consult Sweets' $\frac{26}{11}$, or write direct to General Electric, Div. 413, Bloomfield, N.J.

GENERAL ELECTRIC

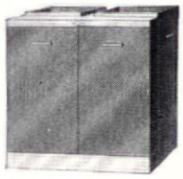
TURN TO

. . . for the complete line of Heating and Air Conditioning

(here are some typical examples)

G-E AUTOMATIC HEAT!

Oil or gas fired, in many sizes. For steam, hot water, vapor. Coordinated in design, self-oiling with inverted impact-expansion.



G-E WINTER AIR CONDITIONERS!

Oil or gas fired. OIL: 3 sizes, 0.95 to 1.90 gal. per hr.—100,000 to 200,000 Btu per hr. GAS: 14 sizes, 60,000 to 270,000 Btu per hr.

G-E ROOM AIR CONDITIONERS!

Three types for cooling a single room or group of rooms, and one for centrally heated and cooled commercial buildings.

G-E UNIT AIR CONDITIONERS!

Ranging from a net total room cooling effect of 19,740 Btu per hour to 113,400. All self-contained. For small stores, restaurants, offices, etc.

The surest proof of the value of a product rests upon the results obtained by using it on numerous jobs. That LIGNOPHOL has given longer life—greater beauty and smoother surfaces to many residential, commercial and institutional floors, is a well known matter of record. LIGNOPHOL fills the cells of the wood with toughening resins, with penetrating oils and with special preservatives which bar the entrance of fungi, molds and other wood destroyers. It will protect your floors against dry rot, cracking, pitting, scuffing and burn marks from rubber shoes.

It brings out the natural beauty of the wood and is suitable for paneling, etc.

Select LIGNOPHOL for floors in residences, schools, gymnasiums and factories and you can rest assured that the job will do you credit. Unlike shellac and varnish, LIGNOPHOL leaves nothing to wear off.

See reproduction of various woods in natural colors in Sweet's Catalog, page 17/40.

LIGNOPHOL
The **ONE** Application Wood Finish

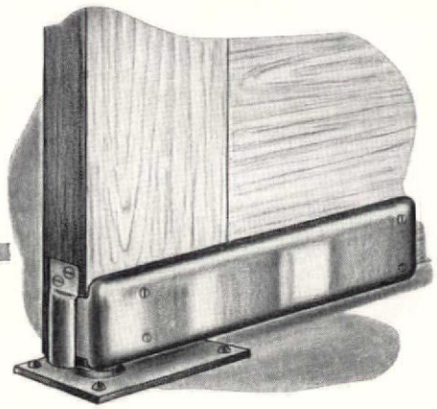
LIGNOPHOL
Preserves and brings out the natural beauty of wood

LIGNOPHOL
Leaves nothing to wear off

DEPT. F-4

L. SONNEBORN SONS, Inc.
88 LEXINGTON AVE. NEW YORK CITY

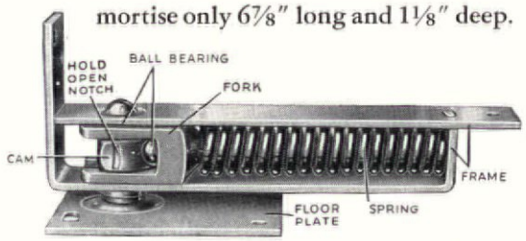
Stanley Floor Hinge



Double Acting Ball Bearing

Specify this hinge – No. 155 – for double-acting doors of residences. For doors 1⅛" to 1¾" thick, it will hold the door open at an angle of 90°. Equipped with hardened steel bearings which carry the thrust of the spring as well as the weight of the door. The reversible side plates are of reduced size and gracefully proportioned – a welcome departure from the "gingerbread" type of hardware.

Very little cutting out is required for its installation, as it takes a mortise only 6⅞" long and 1⅛" deep.



YOUR GUIDE TO GOOD HARDWARE

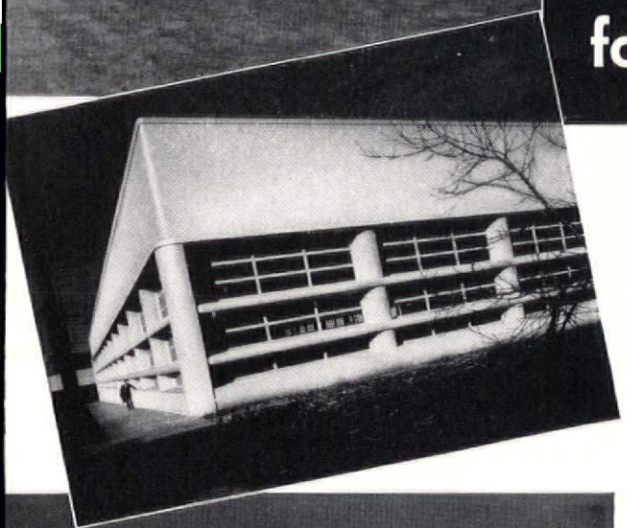
Stanley Catalog No. 61, giving full details on the complete Stanley Hardware line, will prove handy in preparing your specifications. Write for your free copy. The Stanley Works, New Britain, Connecticut.

STANLEY

HARDWARE FOR CAREFREE DOORS

Armstrong Tire & Rubber Co.'s Natchez (Miss.) plant includes a 160 x 760-ft. factory, office building and power plant. Architectural Concrete exterior walls; reinforced concrete Z-D barrel shell roof with 40 x 50-ft. clear bays. Roberts & Schaefer Co., Chicago, engineers. J. T. Canizaro, Jackson, Miss., architect.

Industry endorses CONCRETE for economy, firesafety, appearance



Warehouse for Woodbury & Company, dealers in industrial supplies and heavy hardware, Portland, Oregon. Richard Sundeleaf, architect. Wegman & Sons, contractors.

•

(Below) Engine test house, Pratt & Whitney Aircraft Division of United Aircraft Corporation, East Hartford, Conn. Albert Kahn, Detroit, architect. R. G. Bent Co., Hartford, contractor.

Architectural concrete offers a unique combination of advantages for industrial and defense buildings:

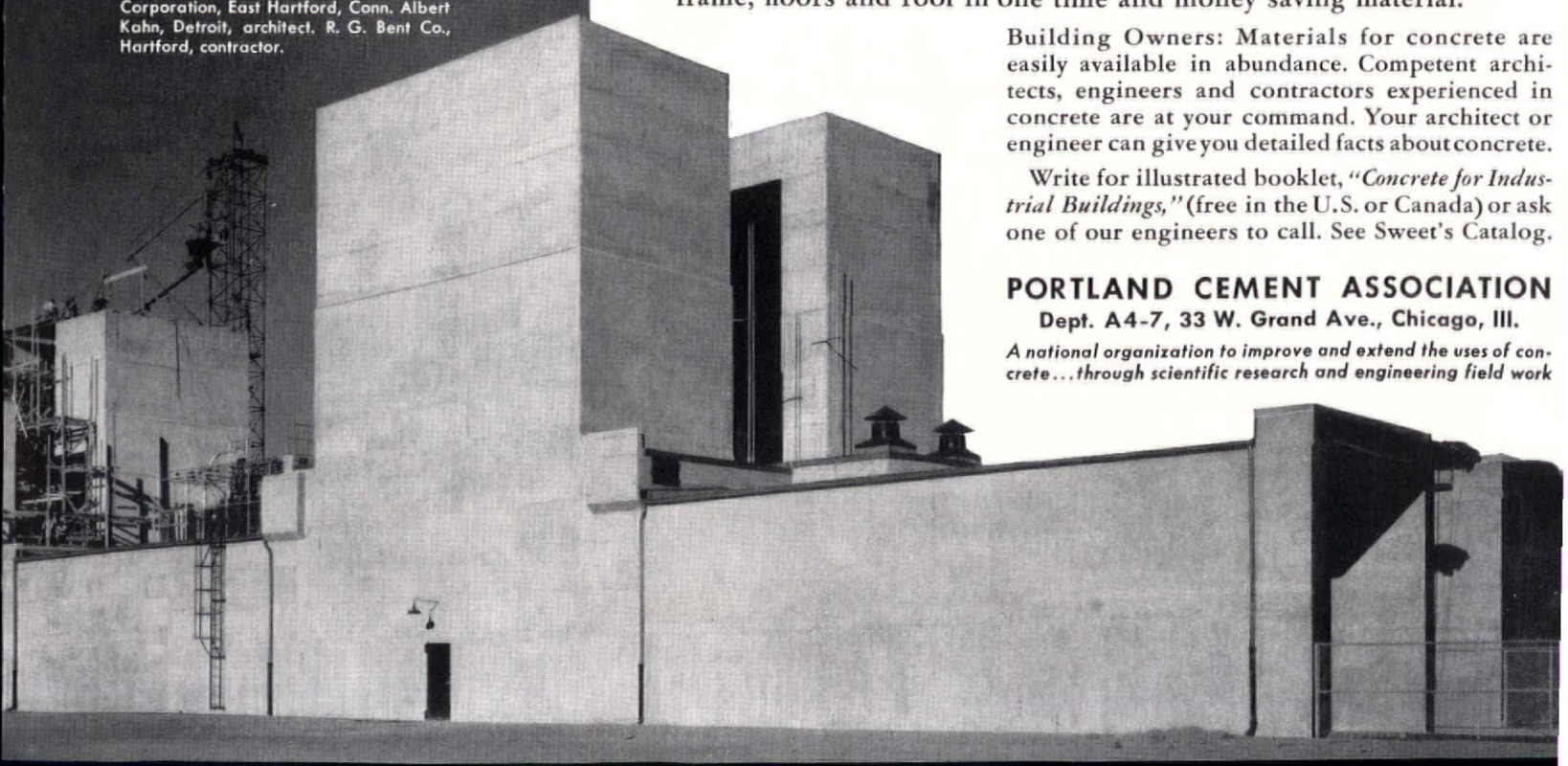
- **SPEEDY** construction; contractors are setting constantly faster time schedules in completing concrete buildings. Concrete jobs proceed all winter.
- **ECONOMY** in first cost and maintenance.
- **ADAPTABILITY** to any requirements of occupancy; for example long, clear interior spans are easily provided.
- **FIRESAFETY**—concrete can't burn; supports heavy loads even at high temperatures.
- **WEAR RESISTANCE** for heavy-duty floors and ramps.
- **RIGIDITY** to dampen vibration and resist shocks.
- **GOOD APPEARANCE**—Architectural concrete has won national recognition as a means of giving outstanding architectural distinction to factories and buildings of all kinds. Walls are cast integrally with frame, floors and roof in one time and money saving material.

Building Owners: Materials for concrete are easily available in abundance. Competent architects, engineers and contractors experienced in concrete are at your command. Your architect or engineer can give you detailed facts about concrete.

Write for illustrated booklet, *"Concrete for Industrial Buildings,"* (free in the U.S. or Canada) or ask one of our engineers to call. See Sweet's Catalog.

PORTLAND CEMENT ASSOCIATION
Dept. A4-7, 33 W. Grand Ave., Chicago, Ill.

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



(Continued from page 98)

mally high, but claim that it will cost the Government less than if it built the houses itself, assuming apparently that what the Government builds will be a total loss. Little is said about the effect on the workingmen and their wives of losing the homes into which they have put all their savings and overtime pay. True, they did not have to make any down payment; "carrying charges are no more than rent." They are pretty certainly more than rent in Government-built houses would be. "When the job ends, they will just walk out." Leaving the furniture behind? Will they not have been urged, so long as the job lasted, to make all the payments they could squeeze out to increase their equity? Won't the ballyhoo boys have been telling them about security for their old age, and home ownership being the best investment in the world, and all the rest of the come on?

Home ownership sales talk to the little man with a temporary job is as benevolent as the patent medicine advertisements of cancer cures before the Pure Food and Drugs Act. There are ways of making home ownership safe for working people, which we have never got about trying yet in this country. But Title VI is decidedly not one of them.

Fifth Failure: To see the futility of trying to curb overcrowding and skyrocketing rents after the evils have become established.

A Committee of the National Association of Housing Officials and Commissioner Elliott of the NDAC appear to agree, on the basis of our very unsatisfactory experience during and following World War I, that, beyond establishing Room Registries in defense industry areas, there is little to do except watch and pray, make investigations and reports, use moral suasion on landlords, try the fear of publicity, and have recourse to legislation only if all else fails. A committee of lawyers is said to be drafting a bill.

But why do we have to wait to see what happens? Whether there is overcrowding? Whether there is profiteering? Whether health suffers? How much discomfort workers and their families will stand before they leave in disgust? Whether the quality and quantity of production will suffer? Don't we know the answers?

As surely as sparks fly upward, where the demand for house space greatly exceeds the supply, rents will rise and keep on rising until they force up wages, after which they will rise again. The spiral of inflation is then under way. Why let it start?

Is there any doubt that sparks *do* fly upward? Remember the full-page special article in the New York *Times* of December 22 with reports from Boston to Seattle? Portsmouth navy yard is "losing 100 workers a day because men could not find decent places for their families to live in." Paterson reports "Every sleeping room in the local YMCA is filled and beds and lockers have been installed in rooms ordinarily used for meetings." At Norfolk "3,000 persons, including many children, live in trailer camps with improper sanitation." The second article, on January 16, is a close-up of what the national defense effort has done to the staid old Pennsylvania town of York. It has started money circulating, added to bank deposits, paid off some debts, increased purchases of consumer goods and services, started rents upward and made it exceedingly difficult to find *any* place to live. Liquor stores work their men in two shifts from 9 A. M. to 10 P. M. Prostitution, syphilis and juvenile delinquency are on the increase. The atmosphere of a gold mining camp of the rawest frontier days superimposed on this ultra respectable background in the name of national defense and the pres-

(Continued on page 106)

Every Home Should be *Calked*

STOPS DRAFTS AND LEAKS—CUTS FUEL BILLS

Residence in Johnstown, Pa., designed by H. M. Rogers, R. A. and built by J. J. Saylor, Genl. Contr., both of Johnstown.

PECORA CALKING COMPOUND USED

The end walls in the above residence are of brick veneer and the front and rear walls are clapboards. Calking was especially important to permanently seal the joints where wood and masonry join.

Pecora Calking Compound is widely used in residence construction because no material is more dependable, no material so long tested by actual use. Pecora Calking Compound will not dry out, crack or chip when properly applied. Pecora-protected homes use less fuel, are freer from drafts and maintain more uniform temperatures.

Pecora invites your specification and request for details.

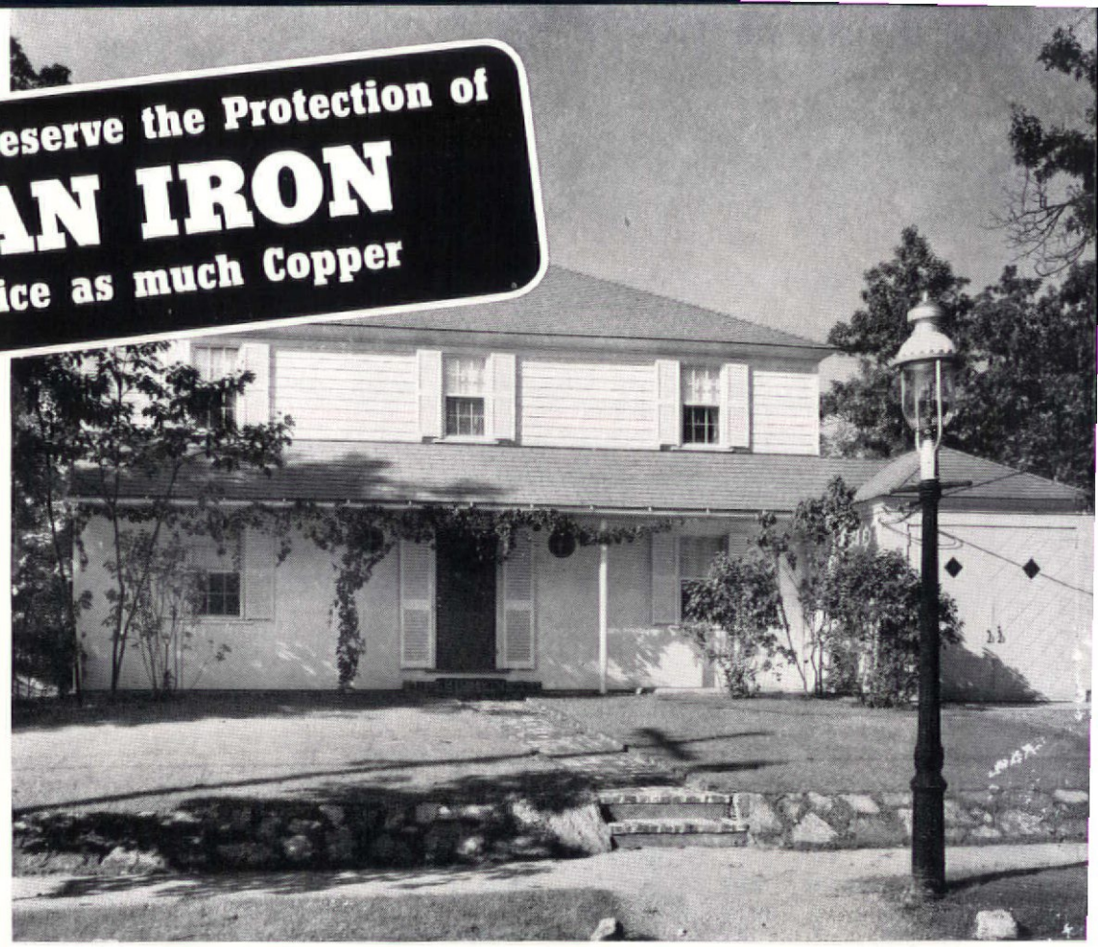
PECORA PAINT COMPANY, INC. 4TH & VENANGO STREETS **PHILADELPHIA, PA.**

MEMBER OF PRODUCERS' COUNCIL, INC. ESTABLISHED 1862 BY SMITH BOWEN

PECORA CALKING COMPOUND

ALSO MORTAR STAINS • SASH PUTTIES • ROOF COATING • PECOMASTICS

Small Homes, too, Deserve the Protection of TONCAN IRON it contains twice as much Copper



Gutters and downspouts of this attractive home on the Eastern Seaboard are long-lasting Toncan Iron.

REPUBLIC STEEL DEFENSE FOR AMERICA

IN THIS EMERGENCY

Paraphrasing an old operatic lyric—"A steelman's lot is not a happy one." When business is at low ebb, the struggle is to get enough tonnage to produce steel economically. When the tide of business swings to the other extreme, the big job we all have is to satisfy the customer who is unable to get all the steel he needs.

Believe me when I say that this is one time when the wheel that squeaks the loudest is not getting the grease. We are doing everything humanly possible to be helpful in this emergency and to be fair in the apportioning of our output—and to assist you further we are constantly setting new records in all our plants in our production of ***steel—first line of national defense.***

R. J. Wysor
PRESIDENT

Only a few dollars extra—an insignificant part of the total building cost—provide this home with the protection that Toncan* Iron sheet metal gives—protection against rust and corrosion. Every small home you design needs the protection of Toncan Iron—the exclusive Republic alloy *iron* that contains twice as much copper as the best copper-bearing steel available today. Long a time-tested favorite for both interior and exterior sheet metal work, it costs less per year of service and minimizes repairs and replacements.

Specify Toncan Iron for all sheet metal work. There is no better way to safeguard the building owner's investment. Our new Toncan Iron Booklet will give you all the reasons why. Copy on request, or see Sweet's Catalog.

REPUBLIC STEEL CORPORATION

General Offices: Cleveland, Ohio

BERGER MANUFACTURING DIVISION • CULVERT DIVISION • NILES STEEL PRODUCTS DIVISION
STEEL AND TUBES DIVISION • UNION DRAWN STEEL DIVISION • TRUSCON STEEL COMPANY

*Reg. U. S. Pat. Off.

REPUBLIC TONCAN IRON

An alloy of refined open-hearth iron, copper and molybdenum—*that grows old slowly*

IS IMPORTANT

THAT'S WHY THEY PREFER

CHURCH *Plastic Covered* **SEATS**

IN WHITE OR COLOR

IF YOUR BATHROOMS have CHURCH SEATS you receive unconscious approval, for CHURCH SEATS are recognized by everyone as the best. Best made—Best known.

CHURCH *Sheet Covered* SEATS come in white and many attractive colors to either match or blend with other appointments. They cost but little more than ordinary painted enamel seats—are well worth the small difference.

You are invited to write for any information desired and an actual sample of *Plastic Sheet Covering* used on Genuine CHURCH SEATS. C. F. CHURCH MFG. CO., HOLYOKE, MASS., Division of American Radiator & Standard Sanitary Corporation.

Church Mol-Tex—The *white* molded Seat everyone's talking about. It's immune to abuse—to burns, bangs, stains—indestructible. Specify MOL-TEX for apartments, hotels and all types of public buildings.

CHURCH *Plastic Covered* **SEATS**

"THE BEST SEAT IN THE HOUSE"

Cabot's Stains for beauty at low cost

Beauty of the grain and texture of wood is revealed and emphasized through the clear, rich colors of Cabot's Creosote Stains. It is not concealed beneath a painty film. The Cabot-stained house above, at Winchester, Mass., was a prize winner in the latest *House Beautiful* competition. Architect: Jerome Bailey Foster.

Cabot's Creosote Stains are moderately priced, and they save money in application and in upkeep costs. Their vehicle is pure creosote—best wood preservative known. The architect of the Cabot-stained house above is John Dinwiddie, San Francisco, Cal.

Only in Cabot's Stains can you get the advantages of our patented Collopaking process. The pigments are divided to sub-microscopic fineness and *colloidally combined* with the oil. Thus, the color penetrates further, giving a depth and richness not obtainable with other materials.

Cabot's Shingle Stains

Creosote

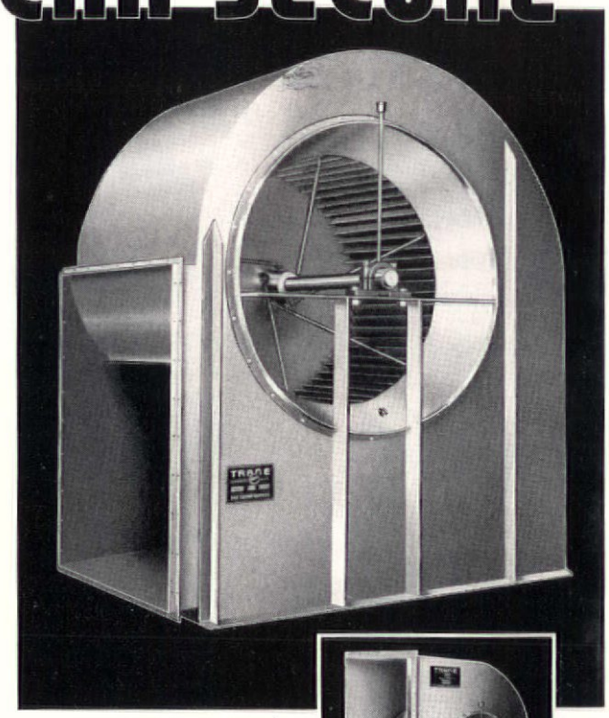
Heavy-Bodied

Free Booklet "Stained Houses"

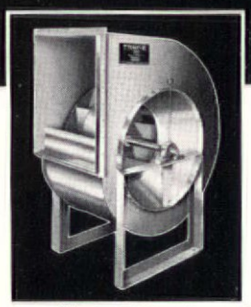
Shows pictures of many prize winning Cabot-Stained houses. Contains full information about both the *Creosote* and *Heavy-Bodied* Stains. Write Samuel Cabot, Inc., 1273 Oliver Building, Boston, Mass.

Now YOU CAN SECURE TRANE AIR BLOWER FANS

Previously Sold Only as an Integral Part of Trane Equipment, this Extensive Line now available Separately for all Heating and Air Conditioning Applications



A Trane No. 54 Single Width Single Inlet Type FC Fan arranged for bottom horizontal discharge. The full box-type base construction illustrated is typical for both forward and backward curved fans, sizes No. 33 to No. 66 inclusive.



Illustrated is a Trane No. 15 Single Width Single Inlet Type BI Fan convertible to any standard discharge. This housing construction is typical for all Type BI and Type FC Fans, sizes Nos. 4 to 30 inclusive.

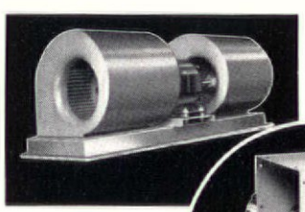
The Trane Fan line includes all sizes and types required for heating and air conditioning work. The fans range from 4½" to 66" — single and double width, belt and direct drive, backward and forward curved wheel construction.

Type FC Fans employ forward curved, multi-blade construction. Type BI Fans are constructed with backward curved blades, having a self-limiting, non-overloading power characteristic.

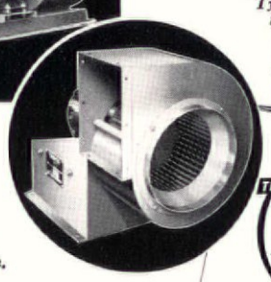
The line also includes utility blowers and multiple fan units for general supply and exhaust duty.

Trane experience in air handling problems is a part of the background of Trane Fans. These fans are of the same design as those that have for years been integral parts of Trane Unit Heaters, Unit Ventilators, Air Conditioners, Evaporative Condensers, and allied units of the complete Trane line of heating, ventilating, and air conditioning equipment.

Now in a separate carefully integrated Trane Fan line, architect, engineer and contractor may obtain the same advantages, the same skill and care in construction, and the same careful testing for capacity, balance and quietness found only in a Trane Fan.



A Trane Multiple Fan Unit for a variety of applications.



Utility Blowers are available in capacities up to 4500 cfm.

SEND FOR THIS . . .

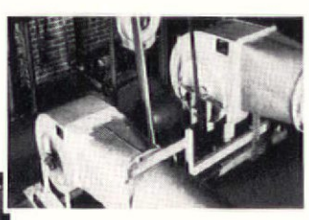
THE TRANE COMPANY
2004 Cameron Ave., La Crosse, Wis.

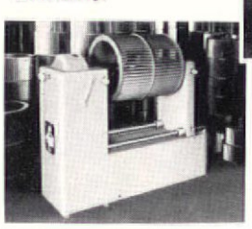
Please send me Bulletin DS-348, the new 52 page catalog describing Trane Fans.

Name_____

Address_____

All Trane Fans are tested and rated in accordance with the Standard Test Code as adopted by the NAFM and the A.S.H. & V.E. Right: A performance test in the Trane Laboratory.





At left: Every Trane Fan Wheel is carefully balanced and checked for weight distribution and alignment before it is assembled in the casing.

TRANE

THE TRANE COMPANY AIR LA CROSSE, WISCONSIN

Also TRANE COMPANY OF CANADA, LTD., TORONTO, ONTARIO

Heating . . . Cooling . . . Air Conditioning Equipment from 85 Offices

Unit Heaters - Specialties - Convectors - Cooling Coils - Blast Coils - Fans
Unit Ventilators - Compressors - Air Conditioners - Low Pressure Refrigeration

(Continued from page 102)

ervation of democracy is somehow profoundly shocking.

Is that the way to build up morale for maximum output? Or for citizenship in a democracy worth preserving?

Sixth Failure: To control the inflational spiral of rent increase before it starts.

Hitler's juggernaut is speedier than the Kaiser's. We won't have time to repeat all the mistakes we made before. This housing bottleneck is already creating a traffic jam.

The time to build houses is before the date they are needed. It can only be done on a mass production basis. Only the government agencies are able to do that. The houses should be rented, not sold.

The way to prevent unwarranted rent increases and a flock of accompanying evils is by freezing all rents in a given locality as of the date when a defense industry large enough to require importation of labor is allocated to it. Nothing of the sort can, of course, take place by executive decree. National legislation would probably be unconstitutional and, at any rate, undesirable. It should come about by voluntary action of the 48 State legislatures in passing a simple enabling act and by voluntary action of each defense locality in adopting its provisions.

As soon as the Office of Production Management let it be known that the existence of such a State Enabling Act was a necessary condition for the assignment to a site within that State of any large defense order involving plant and labor expansion, it is the belief of this observer that the 38 legislatures in session would pass the enabling act without much discussion or delay and that special sessions of the others would be summoned speedily.

There are very few industries which have to be located in just one place. Usually there is a wide variety of choice. Too many already have been put along the seaboard and in centers of population. The present tendency is to decentralize, to go inland, to spread over the country. Competition for the defense industries is keen. If an agreement to adopt the rent freezing ordinance were a condition of getting the new plant, it is hardly doubtful that city councils, township commissions, or county freeholders would be found willing to agree. It does not hurt much to renounce what you have never had—especially when you get a substantial prize in return for doing it.

Rent freezing would not be confined to any economic level. It would apply to hotels and furnished rooms as well as to houses and apartments. There would be no exceptions. There would be, however, the right of review for individual cases of hardship—either way—before some designated tribunal. No effort would be made to set the date farther back than the date of allocation. It is not a reform measure, but a preventive one.

There is nothing new about the idea except its localized application to defense industry areas. All the belligerent countries of Europe and most of the neutrals lived under rent freezing acts as of August 1914 until the war was over and most of them for some time longer. They prevented a vast amount of hardship.

Why should there be any hesitation about keeping the owners of shelter space in a defense industry town from profiteering at the expense of their fellow townsmen, old and new, at the risk of sabotaging the whole national effort? If the national emergency justifies conscription of man power for the army and navy and taxation of excess profits of industry, doesn't it justify the *prevention* of excess profits in the provision of shelter for war industry workers? Would that involve "abandoning an institution we are attempting to preserve"? What are we arming to defend anyhow? The America of George Washington and Abraham Lincoln? Or the America of George F. Babbitt?

FLOORS WITH THE

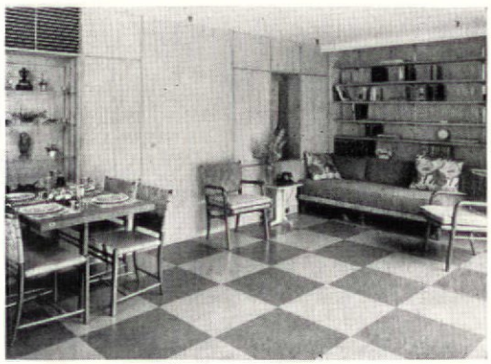
Warmth and Charm

of the HEARTHSTONE

Flexachrome in Entrance Hall of Modern Residence

FLEXACHROME, the new *plastic* floor tile, offers unusual design and color opportunities in the residential field. Colors range from vivid, brilliant solids to delicate, blending pastels — from an inky black to true, clean white. Thirty-three solid and mottled colors, available in sixteen sizes, make the architect's problem of design selection easy and enjoyable. . . . And the peerless beauty of Flexachrome is matched by its iron-like durability. It has safe, firm foot comfort and it will not scar permanently from special abuses such as hot grease or burning cigars or cigarettes. The only maintenance needed is an occasional mopping with mild soap and warm water . . . Here is a *better* floor for kitchen, bath, recreation room and entrance hall areas. Write today for informative data and the name of the nearest approved Flexachrome contractor.

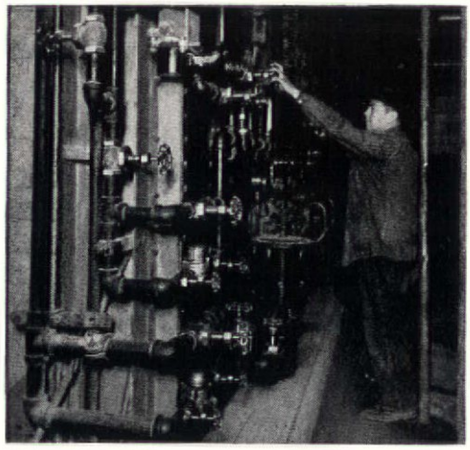
The TILE-TEX COMPANY, Chicago Heights, Ill.
Eastern Sales Office: 101 Park Ave., New York



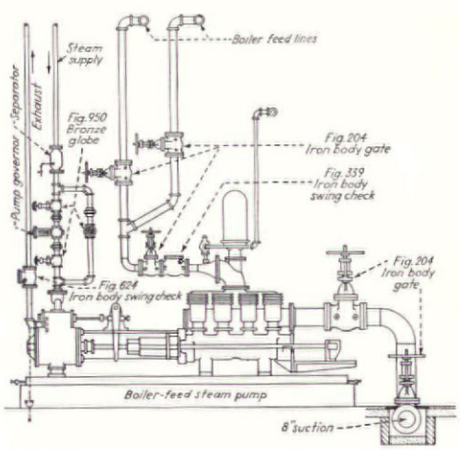
OUR constant objective is to furnish the architect with an honest, steadily improved product that will enable him to design architecturally correct floors which can be installed and maintained properly at minimum cost.

Flexachrome... AN EXCLUSIVE **TILE-TEX** PRODUCT

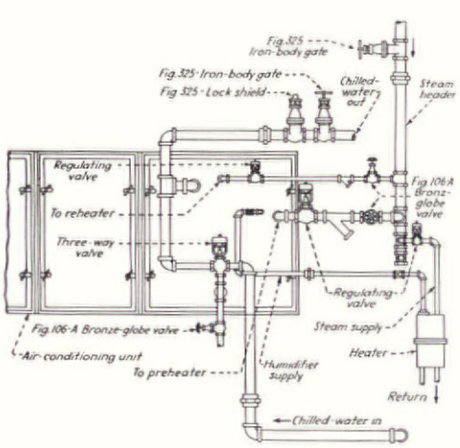
VALVE DETAILS: CIVIC BUILDING



First of four boilers is now in operation, providing heat and speeding "dry-out" during interior finishing work. Jenkins Bronze Valves are shown on boiler feed and fuel oil lines.



Boiler feed steam pump installation detail showing steam supply and return, feed water supply and discharge connections—and the placing of Jenkins Bronze Globe, Iron Body Gate and Swing Check Valves.



Chilled water is pumped from the basement to 30 air conditioning units located throughout the buildings. Diagram shows chilled water and steam lines—and function of the Jenkins Valves.

New Criminal Courts Building and Jail, New York, N. Y.

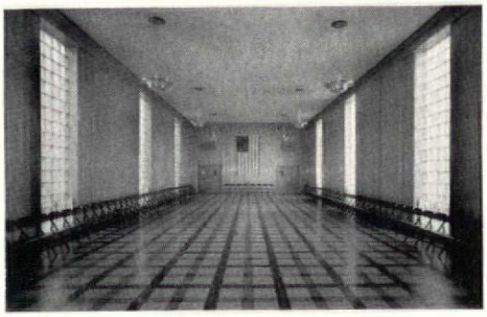
Associate Architects: CHARLES B. MEYERS and HARVEY WILEY CORBETT. Consulting Engineers (Plumbing, Heating and Electrical): SYSKA & HENNESSEY. Heating and Ventilating Contractors: ALMIRALL & CO., INC. Planned under the direction and supervision of City of New York, Department of Public Works — Irving V. A. Huie Commissioner; J. Frank Johnson, Chief Engineer.

THE ARCHITECTS designed this modern building project to replace the historic Tombs and Criminal Courts Buildings and to provide facilities for all the diversified activities centering around a criminal court and jail. Widely differing types of space units range from typical business offices and record rooms to an infirmary and a chapel.

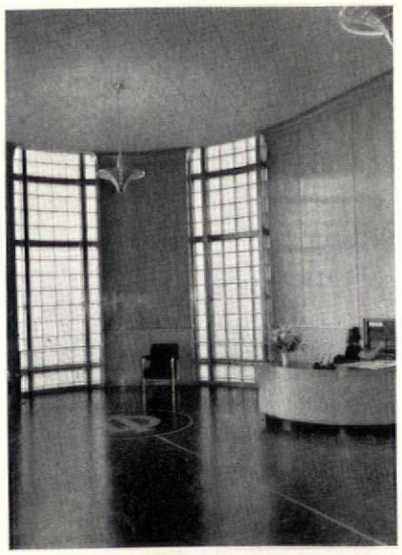
The problems involved in heating and ventilating these various areas were solved with the aid of several unusual applications, including the chilled-water air conditioning units (shown in detail at left). All this heating and ventilating piping is served by a wide variety of Jenkins Valves ranging from giant Iron Body Gates to tiny Bronze Globe Valves. Prompt delivery of these Jenkins Valves was obtained from a reliable, local supply house. Here is another outstanding example of the slogan —"In valves, Jenkins gives you everything".

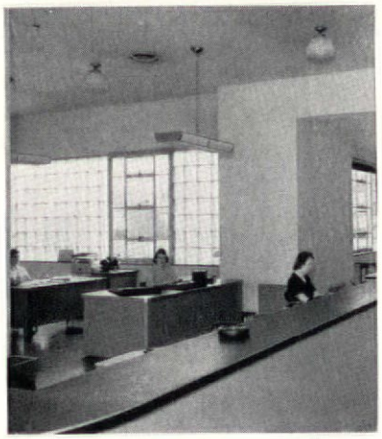
New Building "DESIGNED FOR DAYLIGHT" ...with PC Glass Blocks

THE GENEROUS USE of PC Glass Blocks by Architect Charles F. Owsley in this new Isaly Dairy Company building in Youngstown, Ohio, has resulted in a building really "designed for daylight." Notice how greatly the panels of glass blocks add to the exterior appearance of the building.



THE ASSEMBLY ROOM derives three advantages from its PC Glass Block panels. Plenty of cheerful daylight. Privacy from distracting outside views. And greater freedom from noise . . . because glass block panels deaden outside sounds.





PRIVACY AND PLENTY OF DAYLIGHT characterize this accounting office. Panels of PC Glass Blocks make the room a bright and cheerful place to work.

THE RECEPTION LOBBY gains in appearance as well as daylight by virtue of ceiling-height panels of PC Glass Blocks. These panels have twice the insulation value of ordinary windows . . . make rooms easier to heat, cut fuel bills.

PC GLASS BLOCKS are being used more widely every day by architects who desire one or all of the many advantages glass blocks contribute to modern construction. Generous transmission of daylight, while guarding privacy. Reduction of heating, cleaning, maintenance, and lighting costs. Insulation against sound. And smart good looks. There are three sizes and eight patterns of PC Glass Blocks. Send coupon for free book of information.

"PITTSBURGH" stands for Quality Glass

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PITTSBURGH PLATE GLASS COMPANY

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Please send me, without obligation, your free, illustrated booklet "The Use of PC Glass Blocks in Commercial and Public Buildings."

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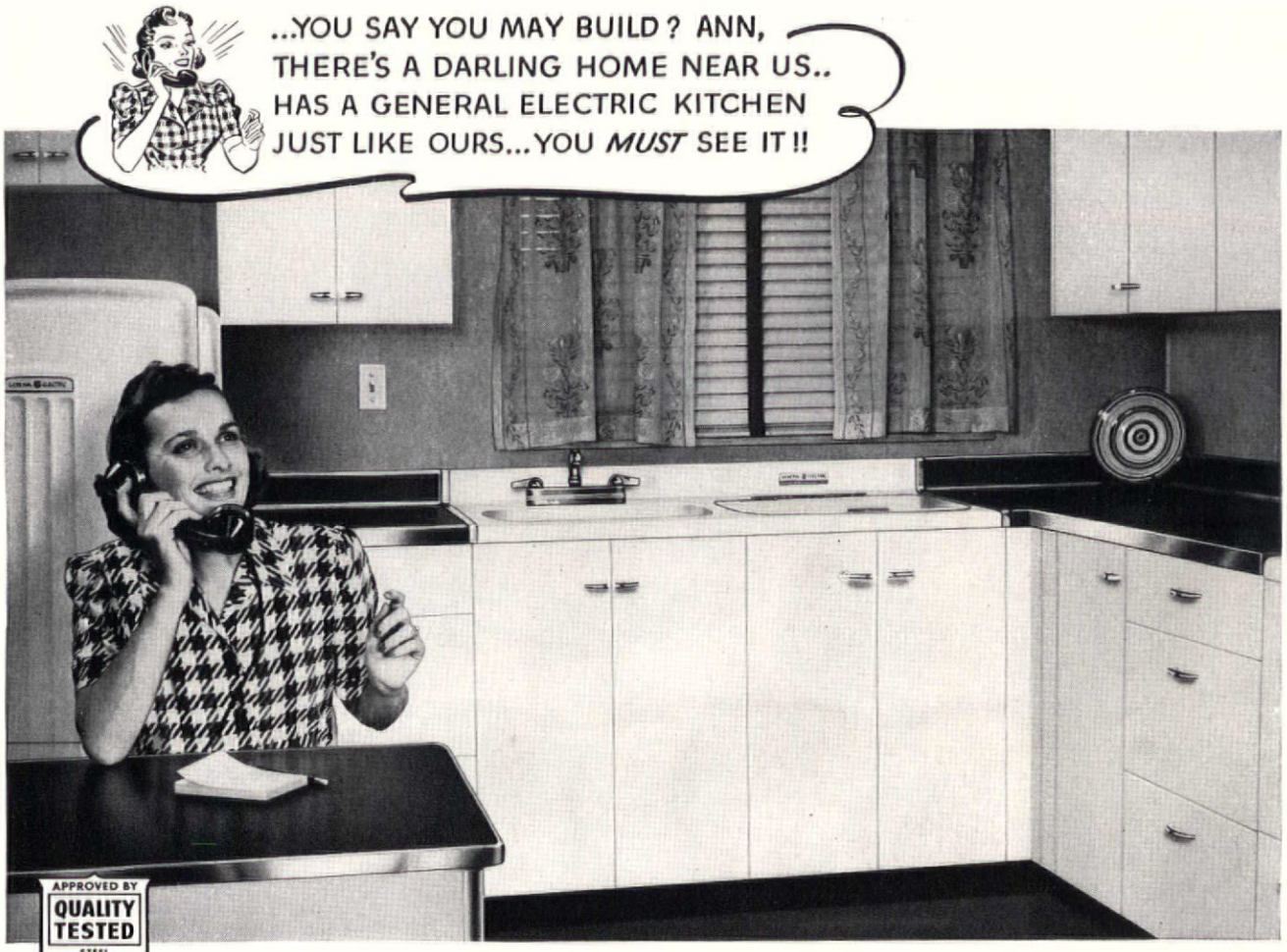
City.....State.....

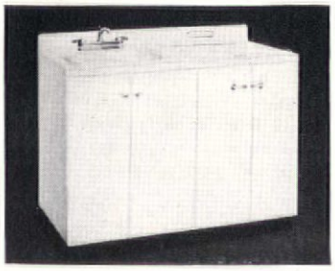


Here's How You Can Be The Top Good Will Builder Of Your Community

Give your clients and customers something to remember you by! Install General Electric Kitchens — they're just about tops in good will building! The streamlined beauty and utility of G-E Steel Kitchen Cabinets and the G-E Electric Sink will be a source of owner pride and satisfaction for years to come. And you'll reap the benefits of word-of-mouth advertising!

Your clients pay no premium of price for General Electric Kitchen equipment. G-E All-Steel Cabinets are *competitively priced* and are easy and inexpensive to install. Their many convenience features have real and *lasting* appeal. Why not get all the facts?

SHE'LL THANK YOU EVERY DAY FOR YEARS



Here's one of the best "salesmen" you can hire . . . the G-E Electric Sink that washes dishes and disposes of garbage *electrically!* Make it a feature of your homes and you'll be remembered — and rewarded.

SEND FOR THE NEW G-E CATALOG!

Gives complete information on G-E Cabinets, Electric Sink, and "Packaged" Kitchens for small homes and apartments. Ask your G-E Distributor for a copy or write direct to General Electric Co., Appliance and Merchandise Department S-1214, Bridgeport, Connecticut.

GENERAL ELECTRIC

PREFABRICATION

(Continued from page 20)

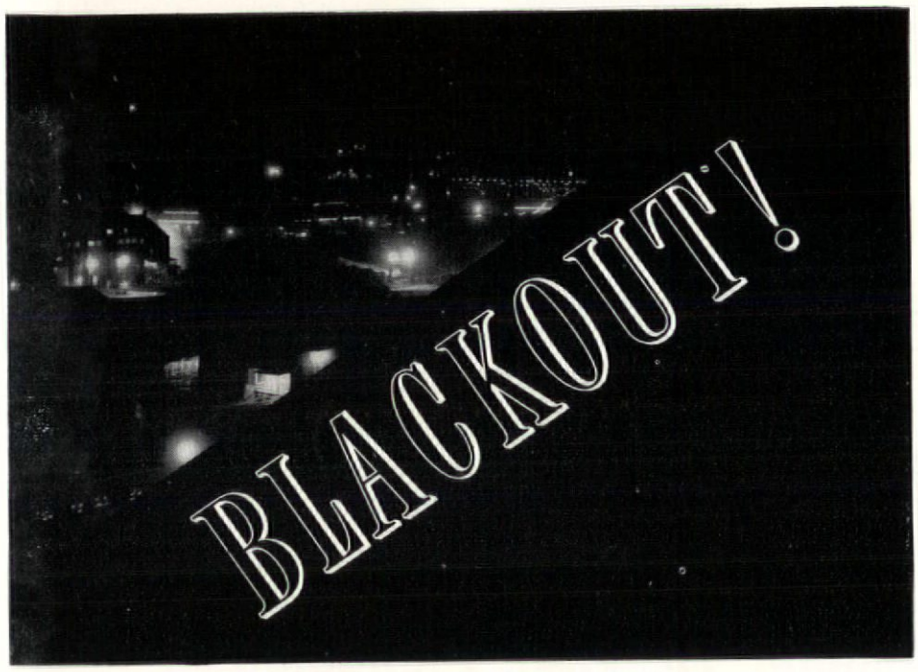
variations have been developed; by lopping 16 ft. off the standard building's length, Dean compresses the house into a two-room and-bath unit with a combination living-bedroom, compressed its f.o.b. price to $1,100 complete with furniture. Forming an L-shaped plan, Dean adds a utility room, second bedroom and garage to the side of the "rear end" of the basic unit, adds $700 to its delivered price. And, for those investors who want a twin house, Dean plans a 12x50 ft. building containing two two-room-and-bath apartments which will sell for $3,000 completely furnished.

While only six piers are necessary to support the standard $1,800 house, a concrete slab foundation is recommended to eliminate vegetation, rodent and insect troubles and to facilitate sub-floor ventilation. Foundation, grading and site utility costs are not, of course, included in the $1,800 delivered price of the standard unit. But, many unusual items are included: an electric range, refrigerator and water heater, bed spring and mattress, living room sofa and chairs, dressing table and mirror, breakfast table and chairs, electric clock, floor lamp, book shelves, window curtains, canvas finish on walls and ceilings, screens, electric heating system whose operating cost in Portand is estimated to be less than $50 per year. As shown in the accompanying photographs, the Haul-a-Way Home's interior finish, equipment and furnishings (mated with the scale of the rooms) would put to shame the appointments of many a larger, more expensive house.

When Haul-a-Way Home No. 1 was set down on a vacant Portland lot for display purposes at mid-February, the accompanying fanfare was modest—a 3 in. newspaper advertisement. Yet, month ago, some 2,000 people had examined the demonstration model, and several hundred had expressed a sincere desire to buy duplicates, once financing terms approaching $250 down plus $25 per month have been arranged. (Such a financing plan would amortize the house and furniture in eight and one-half years.) But, when this went to press, financing of Dean's unique prefabricated house was still an unsolved problem. Local banks and mortgage companies were befuddled by having a single package containing house, lot, equipment and furniture tossed at them, were loath to make a real estate loan on the package. And, the local FHA office has announced that the house is too small, too inexpensive to be eligible for mortgage insurance. Commented Dean, disgusted but not hopeless: "Can you imagine that!" Full information has been made available to Government defense housing officials, but month ago had produced neither orders nor further inquiries.

Pending the arrangement of satisfactory financing terms, Homes Inc. is pondering the wave of tentative orders already received and the production facilities required to meet them. These orders (as yet unaccepted) have come from $40 per month apartment dwellers, from $18 per month slum dwellers, from owners of ocean front property, from private investors who are planning bungalow apartment projects, automobile tourist camps and defense housing projects, from Army officers at near-by and booming Fort Lewis who are eager to rent them for as much as $50 per month, and definite interest has been evidenced by a Seattle Committee charged with the provision of some 1,000 dwelling units for local defense workers.

At mid-month, Dean began work on a plant to handle some of the "bungalow court" orders which can be closed without the arrangement of an easy finance plan. All he needs is a vacant warehouse or garage with a door large enough to accommodate his house on wheels—with 10,000 sq. ft. of floor space he can fabricate eight standard houses at once, turn them out at the rate of one per day per labor shift. By mid-summer he expects to step his production up to several units a day.



WITHIN the new blackout plants, most modern of America's defense factories, light, temperature, humidity and movement of air must meet your specifications as completely as steel and masonry. For here, more is involved than concealment. Here, work can be done to closer tolerances due to control of temperature, and the sabotage of corrosion is eliminated through control of humidity.

York experience dates from the first windowless building in America, the office building of the Hershey Chocolate Company, includes the spectacular S. C. Johnson Plant at Racine, Wisconsin, five of the nine huge blackout buildings of the new Douglas Aircraft Plant at Long Beach, California, and reaches its ultimate expression in the new Ford aircraft engine plant at Dearborn, Michigan, with a 4,400 h.p. air conditioning system.

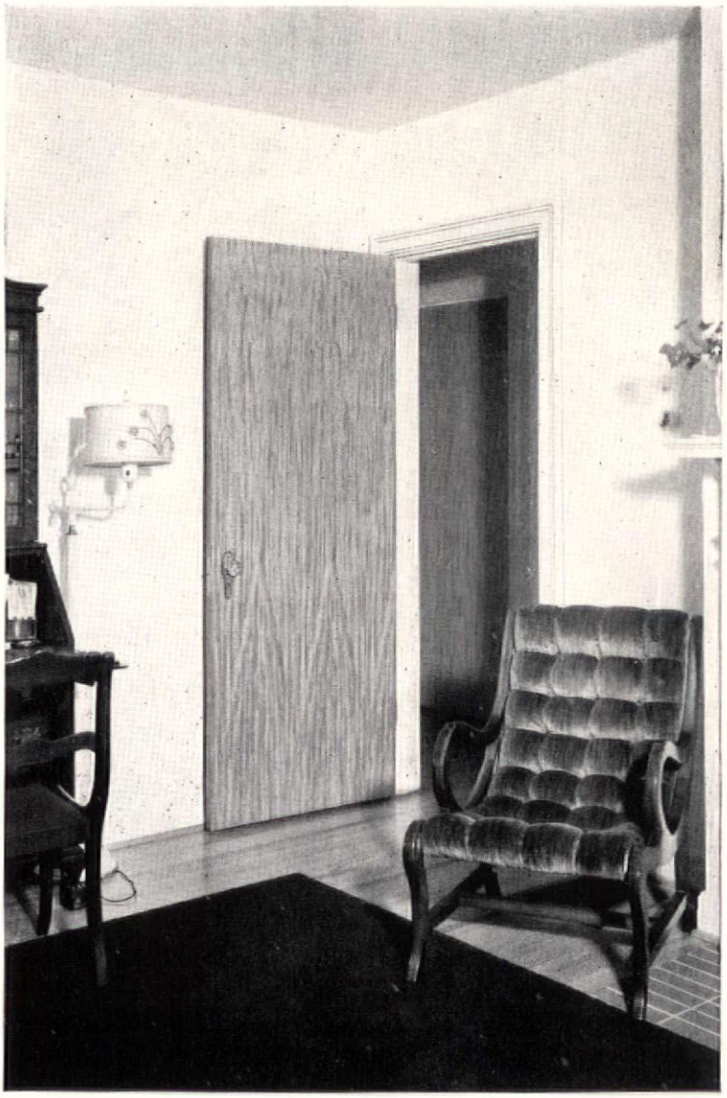
To help speed the wheels, keep hands steady and eyes clear, protect materials in process and in storage, York experience is at your service. York Ice Machinery Corporation, York, Pennsylvania.

YORK AIR CONDITIONING AND REFRIGERATION

"Headquarters for Mechanical Cooling Since 1885"

MENGEL ★ FLUSH DOORS

for Even the SMALLEST HOME!



TALK to the average builder or layman and you'll discover that *most people* think flush doors are expensive luxuries, for big homes only.

That *used* to be true, but it isn't now! And that's an opportunity for smart home-designers to make a *big show* with *little money!*

Mengel Flush Doors are the finest, lightest, sturdiest doors on the market today—yet, thanks to immense production, are available at *very* low prices. Manufactured under the famous Johns-Manville patent, they are backed by the strongest guarantee in the industry:

> ***If any Mengel Flush Door warps in service, and does not straighten out within a reasonable time, it will be replaced free of charge, including the installation cost.***

Let us send you all the facts—*today.* Use the coupon below.

MENGEL BORD

Here's an extremely fine, resin-bonded, ¼″ *hardwood* plywood that you can get in several grades, at lower prices than for any comparable plywood on the market. Made in big 4′x8′ sheets, *with grain running the long way,* and with faces of Mahogany, Gum, Walnut, Birch or Oak! Use the coupon!

The Mengel Co., *Incorporated*
Louisville, Ky.

Gentlemen: Please send me full facts about Mengel Flush Doors, and name of nearest supplier ☐. Also facts about Mengel Bord, as described at left ☐.

Name_____

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once and for all!

● Here is the truly adequate, modern way to wire homes large or small. PLUGMOLD fits above the baseboard, at the chair rail, table-high in breakfast nooks, etc., under kitchen cabinets (with lumiline or fluorescent lighting fittings), under table or counter edges, etc. Puts outlets exactly where needed now . . . or later. Two sizes for all requirements. Easily installed, can be painted to match trim. Ivory plastic outlets available.

THE WIREMOLD CO., HARTFORD, CONN.

Write for copy of NEW Plugmold Bulletin. Also for short sample lengths for your office use.

PLUGMOLD

WIREMOLD

PLUG IN ANYWHERE WIRING SYSTEMS

LETTERS

(Continued from page 44)

needed, I feel certain that these houses could be designed and built by local architects and builders at a great saving in time and money. In fact, we have in our files a number of houses recently built by private promoters at a cost of from $2,100 to $3,500.

LOUIS H. ASBURY

Charlotte, N. C.

Forum:

I have read the correspondence between you and the officials having in hand the construction of the housing in connection with the defense program and it is all very interesting indeed.

On top of this came the testimony before the House Committee which showed a more or less complete lack of common sense in connection with proper planning before work was begun with an admitted loss of something like $400,000,000 in extra construction cost which might have been saved.

That would have been a lot of money to distribute among some architects I know who could have set the Quartermaster's Department straight long in advance.

So keep up the good work. We architects can't hold a candle to a publication like yours in getting these facts across to the public. . . .

LOUIS F. BIRD

South Orange, N. J.

Reader Bird will find other reasons for the cantonment program's high cost on page 82.—ED.

Forum:

Your letters on the use of private architects and experienced home builders in the Defense Housing program seem to me to ring the bell with a resounding clang. I hope that your impetus to fresh thinking and new action will not be dissipated by time and politics.

MERLE CROWELL

Rockefeller Center, Inc.
New York, N. Y.

Forum:

. . . I am one of those architects who has for years tried to understand what building and budget meant and that the ultimate success of a job was the production of space to suit the problem. The esthetic virtues were purely that of depending on the skill of the individual, and one is presumed to be modest about that. I am, again, one of those architects who has tried honestly and fairly to obtain consideration in Washington. As far as I can see the picture, I have neither the funds available nor the time or patience to battle the odds that seem to be in the way. Perhaps the government has never heard of me, nor many other men—and that is my misfortune, but quite definitely, if the reputation and organizations of men in practice are worth something, it would seem to me that tax paying systems might be considered as valuable equities and might conceivably be preserved. Instead of building up huge architectural and engineering staffs, give the established and respected firms an opportunity to be heard; pay them market value for their services; and at the same time, give them a chance to earn a living and keep on normal activities.

ELY JACQUES KAHN

New York, N. Y.

Forum:

I have talked to the heads of some of the Government Architects Offices and they are often definitely against giving out work to the private architects. Some of the reasons given are that the private architects are not capable of giving them the services and results expected in that particular Government office, and that if they give out much work to private architects, they will have to let some of their men go.

If the Government will give out a reasonable amount of work to private architects, the men who lost their jobs with the Government through this fact would probably be absorbed in the private offices benefitted directly or indirectly by getting Government work.

WARD BROWN

Washington, D. C.

Forum:

. . . Your letters are clear and accurate . . . In 1918 this office within six weeks organized an enlarged staff and completed all designs, working drawings, details, and specifications for 200 houses for the Westinghouse Mfg. Co. at Essington, Pa. that have been the pride of that Company and those who have lived in them for the past 23 years. These six room houses have been placed under local experienced contractors from $2,250 to $2,750 each, before the Fleet Corporation took charge of the building by large apartment house contractors from New York on a cost plus 10 per cent basis to an average cost of $6,250. Local surveyors at $15 per day were replaced by distant city surveyors at $30 per day by $1 per year friends! Stoves and furnaces were ordered from Buffalo when a cheaper local supply more suitable was available. Surely politics and inexperience cost the citizens plenty while they (the architectural ones) may need relief.

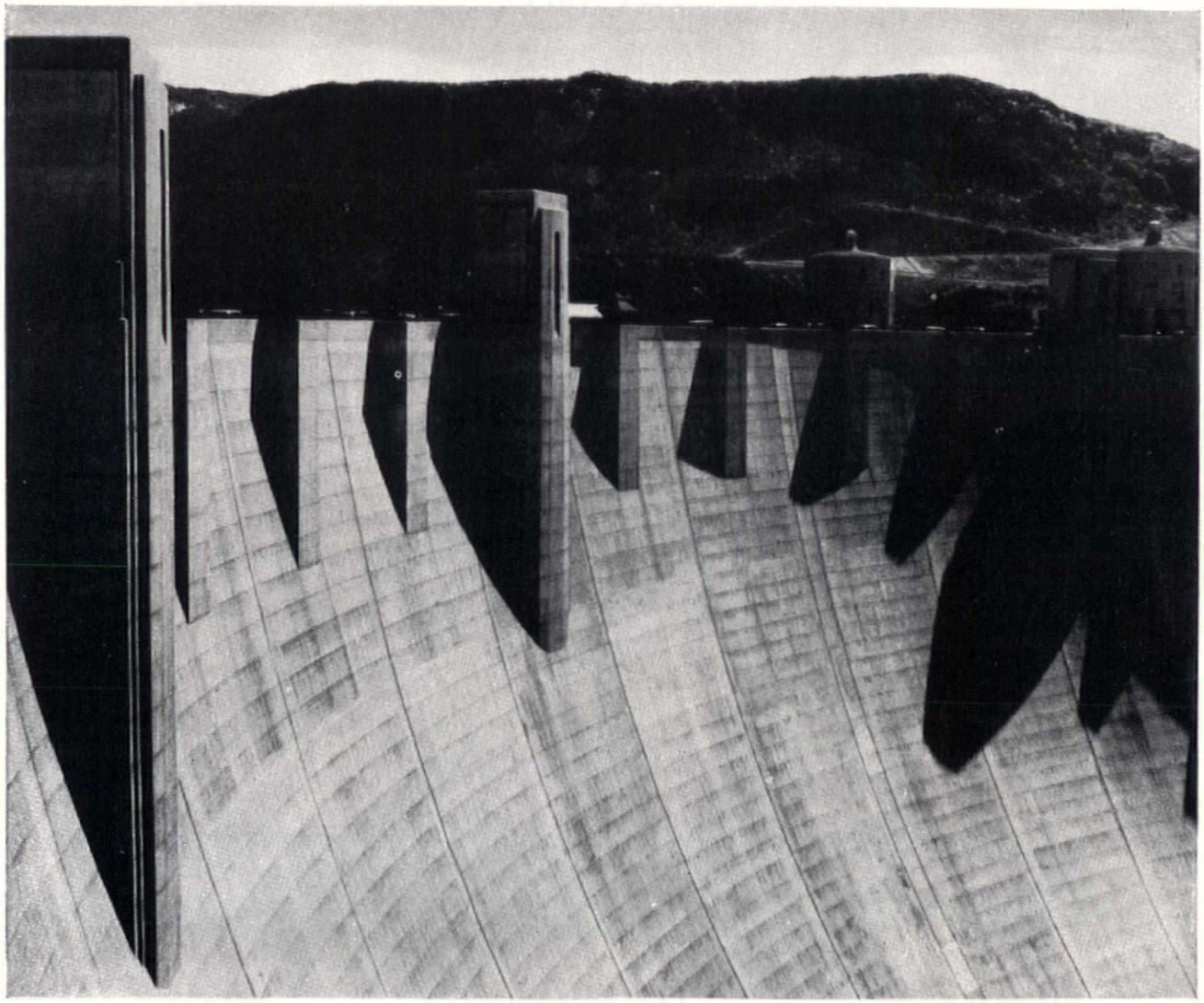
CLARENCE W. BRAZER

New York, N. Y.

Forum:

. . . The outlook in connection with private construction has been very dark since the latter part of last November, so if the Federal Government does not make use of the experienced talent available in the ar-

(Continued on page 114)



How to hold water back!

Every home builder faces the same problem that the engineers of Boulder Dam faced—*how to hold water back!*

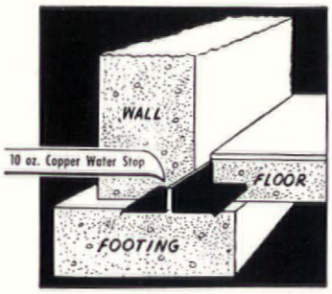
This is the simple secret of a permanently *dry* cellar – a cellar watertight enough to be designed and used as a children's year 'round playroom if necessary.

It can be done—through autumn freeze-over and spring thaw – through summer swelling of materials and winter shrinking.

The answer is copper for water stops and expansion joints.

Set initially in the concrete at little extra labor or material cost, copper joints hold water back. They're doing it at Boulder Dam and they'll do it in that new home you are now designing or building—for years on end.

This is only one (and a very minor) instance of how the Revere Technical Advisory Service is armed with specific knowledge of practical and inexpensive ways to use copper and copper base alloys to waterproof, weatherproof, damp proof and termite proof the home. The services of Revere's Technical Advisors are available to you at no cost or obligation.



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LETTERS

(Continued from page 112)

chitectural profession, the Federal Government will be alone responsible for closed offices and complete destruction of experienced and talented organizations which required many years to organize.

I have had correspondence with the Federal Agencies relative to the employment of architects and architects' organizations combining engineering services, hoping that Washington would not only realize, which of course they do, the availability of this talent, and that shortly some method would be adopted which would permit this talent to serve in connection with the entire National Defense Program, but such correspondence has not produced results to date. . . .

CHARLES C. HARTMANN

Greensboro, N. C.

Forum:

I have read your correspondence with the Defense Coordinator and the Administrator of the FWA on the subject of Defense Housing; it is well stated and has my hearty endorsement.

I believe with you that very few architects, if any, have had experience with housing units which cost as little as $2,000 or $3,000. That, however, is not to say that the experience necessary in developing low cost housing projects is not the very kind that the Government should now take advantage of for its present task. From my own experience in developing the Queensbridge project here in New York, I believe it was the keenness that was shown in saving every available penny and grinding down on every conceivable item that allowed this project to be built in this area and saved more than a million dollars over the sum allotted for the project. Again the same sort of procedure was used when we developed the South Jamaica project.

It is this practical knowledge and experience, coupled with an appreciation of the need for economy of structure, which is now available to the Government through those architects who have done low cost housing and have proven their worth to the Housing Authorities, both local and national.

I believe there is no argument about time, for it is well known that the private architect can accomplish the objective in better time than when the work is done in a bureau.

FREDERICK G. FROST, *President*
New York Chapter
American Institute of Architects
New York, N. Y.

Forum:

Those of us who have had considerable experience in low cost housing, industrial work of magnitude and other work embraced in the Defense Program, have, to use a slang expression, "not gotten to first base."

It seems rather strange that the tremendous expenditures by the Government are being made without the services of qualified men who are thoroughly familiar with conditions in their region, but that they are left in the hands of engineers now in the employ of the companies who will take over and operate the plants.

We realize that the knowledge of these engineers is exceptionally valuable, but in our opinion, quite a saving and far better results could be obtained if they worked in conjunction with the competent architects and engineers who have been in business in these various zones. Private practice, in our profession, is more or less at a standstill and undoubtedly prompt and efficient service could be obtained.

ALFRED S. JOSEPH

Joseph & Joseph
Louisville, Ky.

Forum:

I think your letters on Defense Housing definitely to the point and all of the profession should be grateful to you.

JOHN W. ROOT

Holabird & Root
Chicago, Ill.

Forum:

The attitude of the government officials charged with aiding the housing program can have only the ultimate result of placing

(Continued on page 118)

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— Has the TOUGHNESS to assure applications without tears, rips and punctures — in spite of rough, fast handling and wind whipping.

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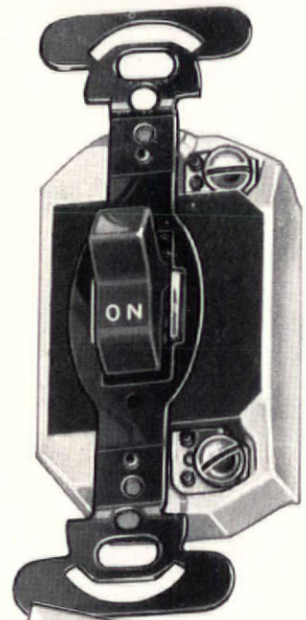

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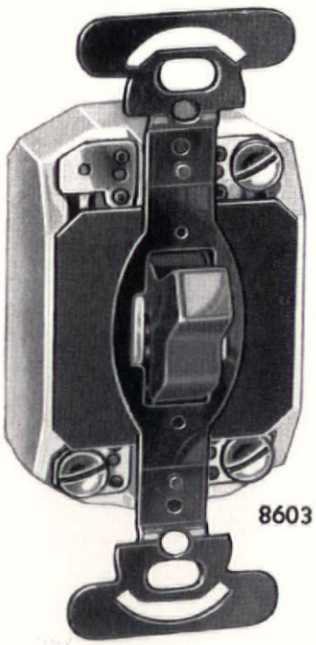

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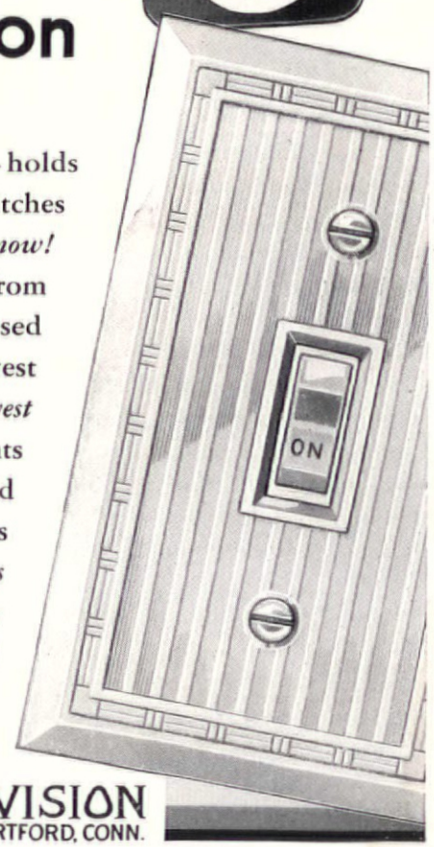

HART & HEGEMAN DIVISION
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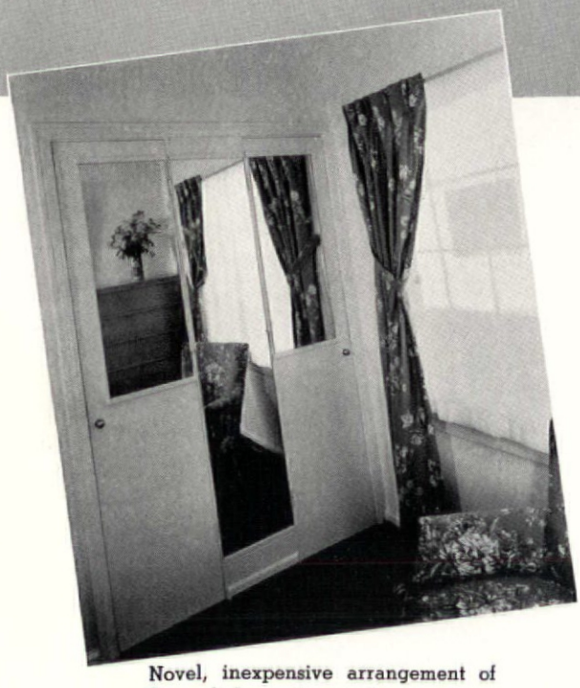
The Nation's Eyes are Turning



Novel, inexpensive arrangement of 3-panel door mirrors give women a feature they "have always wanted."

Built-in wall mirrors of polished plate glass make rooms "seem" larger.

The "Design for Happiness" program is helping Operative Builders erect more houses, sell them faster, and make more profit!

"Design for Happiness" is opening up a new market for highly salable low-cost homes, by emphasizing:—good architecture; quality material; good workmanship; sound financing; and greater livability through the wider use of glass.

Faster sales result through the "eye appeal" and utility of glass features formerly limited to higher-priced houses. Rooms seem larger, gay color cheers bathroom and kitchen, homes are brighter, more livable, easier and more economical to maintain. Home buyers want houses with features like these. Now they can have them at prices they can afford.

Backed by consistent national advertising, publicity and promotion, the program gives you for the first time, a nationally advertised home to sell. The program has demonstrated its ability to get wide publicity while homes are under construction, and attract thousands of prospective home buyers. You cash in on a ready-made market!

Builders all over the country are tying their sales plans into this organized effort to offer greater value in small houses. We invite other builders to join the program. Let us help you increase your sales and profits by putting families into these well-designed, well-constructed, highly livable homes. Write Dept. AF441, Libbey·Owens·Ford Glass Co., Toledo, Ohio.

LIBBEY·OWENS·FORD

to this *New Kind* of House

Vitrolite (wall glass) adds gay color that never fades. It cleans with the wipe of a damp cloth.

Storm windows reduce draughts, make homes more comfortable, reduce heating costs up to 30%.

Architects interested in Residential Construction find "Design for Happiness" stimulates home building in all price classes.

The "Design for Happiness" program is creating widespread interest in homes that provide:

1. good architecture
2. quality materials
3. good construction
4. sound financing and
5. more enjoyable homes through the wider use of glass.

This program is opening up a new market of home-owner prospects by focusing special attention on the low-cost field—offering low income families truly fine, livable homes at prices they can afford.

Supported by extensive and consistent L·O·F advertising, the program is creating widespread interest in home construction of all price classes. Prospects developed by this publicity, and builders interested in this program, are being referred to their "local" architects for sound design, competent planning, and careful supervision.

Since "Design for Happiness" homes are being built in quantities which offer possibilities comparable to those of large-scale housing projects, this program can be the means of stimulating business for you and your associates. We will be glad to send you information about the glass designs that have been used in "Design for Happiness" projects in many communities.

GLASS COMPANY

LETTERS

(Continued from page 114)

all professional practitioners on the government payroll. It will be practically impossible for ordinary private enterprise in building to compete with government subsidized projects. That can be arithmetically proven because with the increase of tax-exempt or subsidized housing, the other fellows will have to pay not only their own taxes, but those of the subsidized projects.

The simplest approach is apparently too difficult for those who are trying to meddle with the economic affairs of the country. Let them busy themselves with finding ways to provide cheap and easy credit for the man of enterprise. It is well known that City Housing Authorities as well as money lending institutions can procure money at rates from ½ per cent to 1 per cent per annum while the builder is soaked rates of 5 per cent to 7 per cent.

Let them also busy themselves with having reasonable union rules established so that the public may be represented in eliminating jurisdictional disputes and unreasonable regulations. At present in government housing, the government underwrites the union rule book no matter what it is by prescribing that all union regulations and pay in a district must be adhered to. The union rule book becomes the law of the United States. This need only be stated to indicate how absurd a place we would have to live in if every organization would make similar rules.

JACOB MARK

Brooklyn, N. Y.

Forum:

Your article on Defense Housing:

First—The Post Office boys had the contact. Johnny on the spot.

Second—Once in—they proposed, for instance Bridgeport, cement block row houses, central heating plant.

Bridgeport's Mayor McLevy has just returned from Washington where he protested against this type as it could not be disposed of to individuals after the war. He wants individual houses. They had a successful experience in the World War with individual houses; Crane Development—still salable because of its charm.

Third—Experience re. $2,000-$3,000 houses. Rows and rows of characterless boxes as you illustrate in FORUM are not the last word yet. It is not the house that needs brilliant design, it is group design first, after—good individual units.

We might as well realize Bureau Architects are gradually cornering all large government work.

CAMERON CLARK

New York, N. Y.

Forum:

. . . I concur in your viewpoint 100 per cent. The entire "setup" of Government housing as applied to our locality is, in my opinion, very poorly handled. The condition under which local architects function on this type of housing is bad. The conditions are such that the press is constantly after the local housing group with the result that the impression of local architects, by the public, is unhealthy. The responsibility for this condition, in my humble opinion, can be laid at the door of those who created the conditions and the organization under which the local architects are forced to function. I am in a position to speak quite frankly, because while I am not connected in any way with Government housing, I acted as an arbitrator which gave me an insight into the entire set up.

My rather long expericene of better than fifty years indicates that the demountable house has existed in men's imaginations for that time, and while I have seen many such attempts, the best two days ago, I have not yet seen one of such promise as to indicate national use. So if the gentleman is looking for such, he is, in my humble opinion, looking for rainbows. Wishful thinking will not provide quick defense housing.

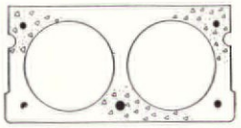
The problem is, of course, economic. Number of man hours plus price per hour, with a deflation in construction standards. Housing people have already deflated design so even intelligence, which you get for nothing today, is missing.

GRANT A. C. BEHEE

Newark, N. J.

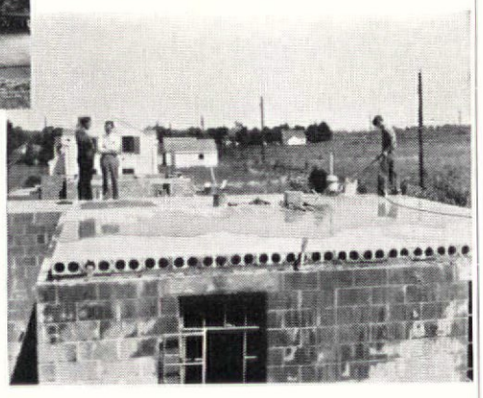
(Continued on page 120)

FLEXICORE



REINFORCED CONCRETE

FLOOR AND ROOF SLABS



Above is an unretouched photograph of a FLEXICORE ceiling.

At right is a construction view showing FLEXICORE slabs in a small house.

The small house can now afford

the same fire-safe, permanent construction as a skyscraper. Flexicore Floor and Roof Slabs wrought this revolutionary change.

- Beautiful Finished Ceiling — Plaster is Eliminated.
- Long Spans — Up to 22 feet.
- Designed for Live Loads up to 200 lbs. p. s. f.
- PRESTRESSED Steel Reinforcement.
- Termite and Vermin Proof.
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- Light Weight.
- Applicable to All Types of Residential, Apartment, Commercial, Agricultural and Industrial Buildings.
- Speeds Construction.

A complete list of concrete products manufacturers producing Flexicore Floor and Roof Slabs in the United States will be furnished upon request.

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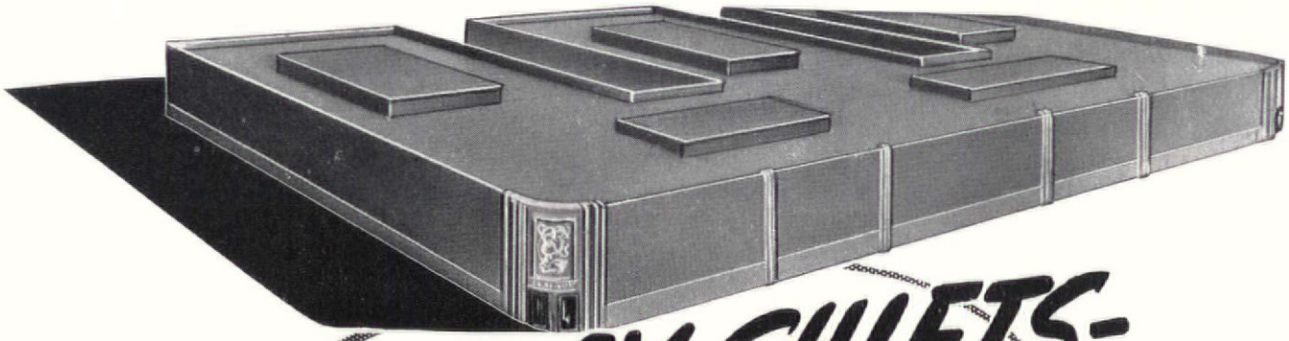
DAYTON, OHIO

Price Bros. Co.
1932 E. Monument Ave.
Dayton, Ohio
Please send me your new FLEXICORE booklet.

Name .....

Company .....

City ..... *State* .....



3 DAY SHIFTS— each 24 hours!

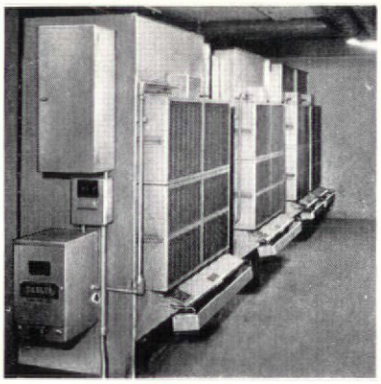
IN AMERICA'S NEW WINDOWLESS FACTORIES

Back in 1930 when "Black-out" was just a theatrical term, American industry was already beginning to move into blacked-out windowless factories.

Of the many problems presented by this innovation, one of the most important was the control of dust — both atmospheric and process — for, without dust control, the ideal working conditions for which this type of factory construction was designed, could not be obtained.

American Air filters and dust control equipment were installed in America's first windowless factories, and within the decade, hundreds of similar installations have performed with uninterrupted efficiency to keep the air within these buildings cleaner than the air found out of doors. Thus, every shift of workers in America's great "blacked-out" factories enters a new world of comfort and high production efficiency — thanks to cleaned air.

The American Electro-Matic filter offers a timely solution to the many new air cleaning problems introduced by the spread of the windowless factory to industries where the control of oil vapors and welding fumes present a difficult problem.



A typical Electro-Matic air filter installation in a large Eastern Industrial plant. Please write for Bulletin No. 250C.
AMERICAN AIR FILTER CO., INC.,
192 Central Ave., Louisville, Ky.

The Electro-Matic Filter which collects air borne dust, soot, smoke, oil vapors and welding *electrically* is the outstanding air cleaning development of the decade. How it works, construction blueprints, efficiency tables, and the interesting story behind its development and application are given in the Electro-Matic bulletin No. 250C. A copy will be sent you free, without obligation.

Cleaned Air AAF *Makes it Possible*

LETTERS

(Continued from page 118)

Forum:

I read with pleasure THE FORUM's article on the subject of private architects in the Defense Housing Program in the March issue, and I sincerely believe the work you are doing in this direction is one of the most beneficial steps taken in the interest of the private practitioner.

Through the medium of THE FORUM, I really believe we have a voice that is tremendously far-reaching, and there can be no question but that your policy of eliminating the "Sugar-Coating" to provide a proper solution of the problem and to attain the desired end is the proper one.

It is with a great deal of pleasure that I extend my sincere thanks to you for the very splendid work you are doing in this direction.

SIDNEY L. STRAUSS

New York, N. Y.

Forum:

I think the architectural profession owes you a great debt of gratitude for going to the "front" for them in this emergency.

We architects, who have for the past few years specialized in housing of all types from the small single-family house through the garden apartment types up to and including the modern fireproof multiple dwellings, have learned a great deal about house planning, costs, location, and also the financing of the various types of housing.

There is no doubt that you are correct in your statement that the government, in this extreme emergency, should take advantage of this type of experience which I am sure could be found throughout all sections of the country.

WILLIAM M. DOWLING

New York, N. Y.

Forum:

. . . We think you have put your finger unerringly on the source of trouble, and surely hope something may be evolved as a correct solution.

WILLIAM J. SAYWARD

Sayward & Logan
Atlanta, Ga.

Forum:

. . . I do not agree with the January remarks of the "Federal Architect" saying that it is unpatriotic to criticize the housing, and particularly the army housing, progress. In that swamp of bureaucracy at Washington it is probably difficult to get anything, but the attitude of the administration through its agencies of opposing the private architect as much as possible, has brought its own reward in delay and poor design.

I am utterly against the "demountable" idea. Millions have been spent in playing with this idea and millions have been lost. To begin to fiddle with it again in this period of emergency is silly, but probably the bureaucrats and army people have got to have it proved to them all over again, as it has been proved to so many others long ago. Some time the demountable house will be a fact, but it cannot be done in the next year or two, and that is what should be thought of at the present time. . . .

PHILIP GOODWIN

New York, N. Y.

Forum:

. . . Many people have been concerned in recent months over the shoddy quality and unexpectedly high cost of much of this defense housing construction. Until I saw your letters, it had not occurred to me that some of this trouble might have been avoided through the retention of competent private architects in the first place.

You should certainly get the acclaim of the profession and the endorsement of other citizens in this constructive effort to speed the completion, reduce the cost and improve the quality of the new buildings now being put up incident to the nation's defense efforts.

GEORGE DOCK, JR.

New York, N. Y.

New H.B. Smith MILLS "20"

BOILER FOR MEDIUM SIZE HOMES!

A MODERN BOILER DESIGNED EXPRESSLY FOR AUTOMATIC FIRING

To alert architects who have been demanding a boiler capable of meeting the new requirements of today's heating systems, the No. 20 MILLS will prove a *striking revelation in boiler performance.*

The No. 20 MILLS incorporates such space and money saving features as *built-in tankless heater* for domestic hot water and *"sealed tight" flue doors* to preserve combustion results . . . has more all important direct heating surface than any other boiler of comparable size.

Architects with medium size homes now on their boards should make it a point to investigate the possibilities of this new unit.

Just send the coupon below for complete information.

The H. B. SMITH Co., Inc., Westfield, Mass.

Please send me complete information on the *New* MILLS "20" for ☐ Oil Firing ☐ Stoker Firing

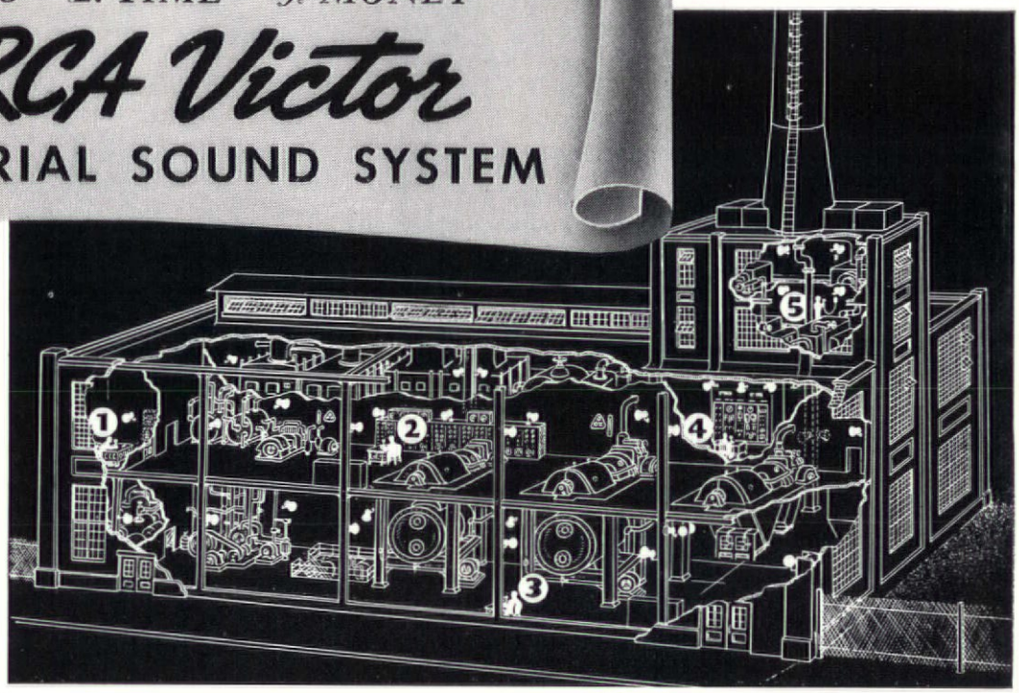
Name.....

Address.....

HOW A MODERN POWER PLANT EFFECTS 3 IMPORTANT SAVINGS

1. *STEPS* 2. *TIME* 3. *MONEY*

With *RCA Victor* INDUSTRIAL SOUND SYSTEM



In a power plant RCA Victor Sound System provides communication with any individual loudspeaker outlet—or all outlets simultaneously. Picture shows (1) Chief Engineer in office at innerphone (2) Switch Operator in Turbine Room (3) Pumpman on pump and filter floors (4) Fireman in Boiler Room (5) Water Tender in Fan and Automatic Regulation Room.

Architects help their clients "up" efficiency, "down" lost motion and expense by specifying this low-cost, high quality industrial equipment that coordinates management, production and man power.

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1. PRODUCTION—Instant communication along production lines, between control positions, between floor and moving cranes, between office and warehouses. Facilitates the orderly movement of raw and finished materials to accumulation points. Intelligible instruction to personnel *above* extreme noise levels in mills, shops and foundries.

2. PERSONNEL RELATIONS—Safety talks . . . Music during lunch and rest periods, and to relieve fatigue . . . Instructive talks to improve efficiency . . . Management talks to entire personnel or separate groups . . . Recreational or social functions.

3. ADMINISTRATIVE CONTROL—Call and paging system to locate executives, key men, and visitors . . . Time, Fire and Safety Signals . . . Instant contact in emergencies.

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Power plant or hospital; business office or hotel—no matter which holds your interest—here's equipment that renders a real service.

An RCA Victor Industrial Sound System saves in three important ways—steps, time and money. By making possible instantaneous mass communication over large or limited areas, it promotes efficiency and reduces operating expense. Walking and waiting time become profitable *working* time.

Write or send coupon for full details about quality engineered RCA Victor industrial sound systems that are available for any desired number of loudspeaker outlets. If you wish, a specially trained RCA sound engineer will gladly discuss any sound coverage problems with you.

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A SERVICE OF THE RADIO CORPORATION OF AMERICA
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RCA Manufacturing Co., Inc., Camden, N. J.

Please send me folder (Form 152509) describing RCA Victor Industrial Sound System.

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FORUM OF EVENTS

AWARDS

To KENNETH J. BREHM and DONALD H. NEWMAN, duplicate gold medals in the eighth annual Hamlin prize sketch competition among third and fourth year students of the Columbia University School of Architecture. The sketches tying for first place presented plans for remodeling Greeley Square in New York City.

To VINCENT W. SEEBACH of New York University, an award of $200 as the first prize winner in the Annual Students' Bridge Design Competition, held under the auspices of the American Institute of Steel Construction. The second prize of $100 went to R. KENNETH KENDALL, the third prize of $50 to M. R. HARRISON, JR., both of Iowa State College.

To ALBERT GICK and NICK CALABRESE, one-year scholarships in Pratt Institute, Brooklyn, N. Y., for submitting the best work in the National High School Art Exhibition. Additional scholarships were awarded to ARTHUR BRENNER and LOUISE POKERN.

The NEW

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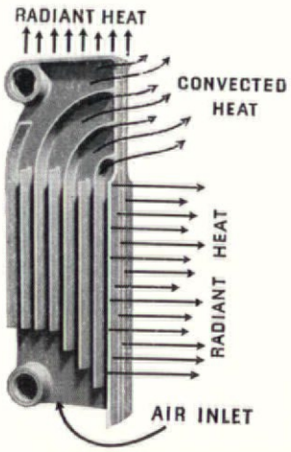
TWO-WAY Heat

FROM A

ONE-WAY Source

You know, as well as we do, that any warm air system, regardless of being fan pushed or what not, furnishes only a *one-way* convected heat.
The heat that rises, and must first heat the top of a room and work down.
But do you know — or have you forgotten — that only from radiators can you have a *two-way* heat?
One, the radiant heat of which, heats the bottom of the room, keeping floors warm; and the convected heat, warming the top. The two unite, forming a quick acting, *always-in-balance* heating.
This New Burnham cabinet type Radiant Radiator, is a decided radiator heat improvement, well worthy of your consideration.
Send for catalog.

See Sweet's. See for yourself.



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Irvington, N. Y.—Dept. J Zanesville, Ohio—Dept. J

Representatives in All Principal Cities of the United States and Canada

COMPETITIONS

The New York Chapter of THE AMERICAN INSTITUTE OF ARCHITECTS announces the second annual competition for the $1,200 Arnold W. Brunner Scholarship. Awarded for "the pursuit of advanced study in some special field of architectural investigation to be selected by the candidate," the competition is open to any U. S. citizen engaged in the profession of architecture. Applications will be received at the Chapter headquarters, 115 East 40 Street, New York City, until April 15. The winner will be announced after June 1.

EDUCATIONAL

THE UNIVERSITY OF ILLINOIS announces the tenth annual consideration of candidates for the Kate Neal Kinley Memorial Fellowship, yielding the sum of $1,000 for a year's advanced study of the fine arts in America or abroad. Applications will be received up to May 15. Requests for application blanks and additional information may be addressed to Dean Rexford Newcomb, College of Fine and Applied Arts, Room 110, Architecture Building, University of Illinois.

THE UNIVERSITY OF MICHIGAN College of Architecture announces that the George G. Booth Traveling Fellowship in Architecture will be offered again this year. The competition in design will be conducted during the two weeks beginning April 11. Prospective candidates should write to the College of Architecture, University of Michigan, for additional information.

One $400 and four $200 first-year scholarships in Architecture will be granted by the College of Fine Arts, SYRACUSE UNIVERSITY, for the school year, 1941-1942. Applications for the scholarships must be submitted by June 26 and competitions will be held on July 12, 1941. All correspondence regarding competitions should be addressed to Dean H. L. Butler, College of Fine Arts, Syracuse, N. Y.

THE PENNSYLVANIA STATE COLLEGE announces the establishment of the Ellen H. Richards Institute to study improvements in standards of living in the field of foods, textiles and shelter. Investigations of the suitability of new materials for the construction of houses and of the performance of various new types of household equipment will be carried on by the newly created Institute.

Three visiting faculty members have been added to the staff of THE UNIVERSITY OF SOUTHERN CALIFORNIA, for the first term of the summer session. Harwell Hamilton Harris, designer, will offer classes in architectural design; Dr. Dimitris Tselos will give courses in modern architecture and allied subjects; Rexford E. Brandt will teach drawing and painting.

(Continued on page 126)

Do You Hire Three Different Tailors to Make Your Coat, Vest and Pants?

Of course not. Yet these busy days architects and builders are taking time out to see several electrical equipment salesmen when they could easily obtain everything from a single, well-equipped source.

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FOR ARCHITECTS AND BUILDERS

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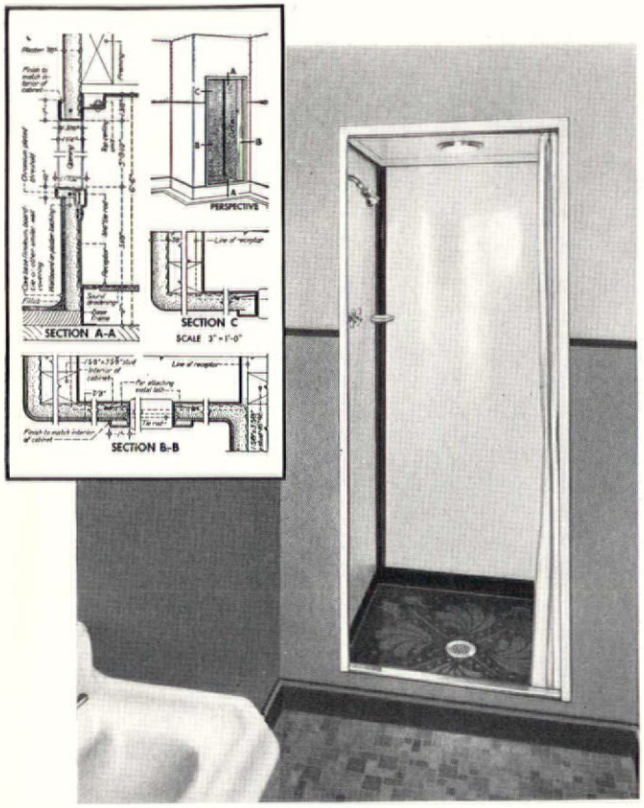
WEISWAYS INTO WALLS
with Entrance Adapters



● Weisway's *guaranteed leakproof* construction may easily be combined with genuine "built-in" beauty by the use of the Weisway Entrance Adapter Cabinet Shower. (Standard model illustrated.) The stiles are an integral part of the cabinet sidewalls, and with the header are finished in high temperature baked enamel to match interior of the cabinet. Concealed surfaces treated with durable, effective sound-deadening material. May be used with glass door, or curtain, as preferred.

While thus giving the attractive appearance of a built-in installation the Weisway structure itself is not affected by settling or shrinkage of surrounding wall and floor materials. With the Foot-Grip, No-Slip floor of vitreous porcelain, in attractive sea-shell pattern, Weisways are the most practical and dependable as well as the most effective solution of the shower bath problem in homes, clubs, institutions or industrials buildings.

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Without obligation please send details and specifications on Weisway Entrance Adapter Model Cabinet Showers.

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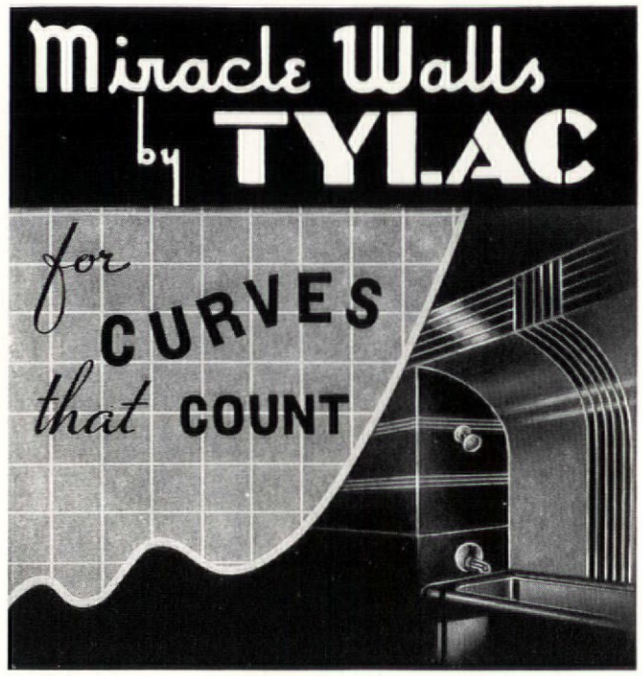

Beautifully curved, lustrous streamlined interiors of TYLAC result in an upward curve in the sale of homes. The distinctive touch provided by TYLAC in a home is "Showmanship" that closes the sale. In bath and kitchen, the two key points of interest to the prospective buyer, TYLAC gives appealing color and a wall surface that requires only simple washing to keep clean.

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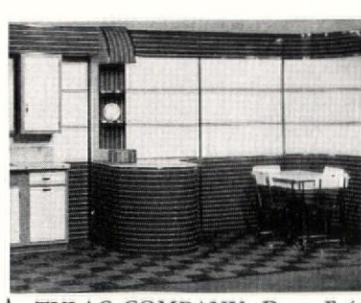

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FOR MODERN WOOD TREATMENT

Flat-cut and Quartered Walnut Flexwood treatment, Board Room, International Harvester Co., Chicago, Ill.; Raymond Loewy, Designer; 2,500 sq ft. of Flexwood used

Appropriate settings for big business feature wood treatment. Leading architects and designers today create board rooms and executive offices featuring Flexwood in modern design. A fine specimen is the Board Room in which Raymond Loewy, Designer, used Flat-cut and Quartered Walnut Flexwood, set off with half-inch gold leaf bands, to provide the proper atmosphere for International Harvester Co. No longer need any executive deny himself the luxury of an office finished in genuine wood, because existing rooms can be transformed . . . quickly and economically . . . with Flexwood.

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Flexwood and Flexglass are manufactured and marketed jointly by The Mengel Co., Louisville, Ky., and the United States Plywood Corp., New York

FORUM OF EVENTS

(Continued from page 122)

CALENDAR

May 8-9. Fourth Annual Anthracite Conference, Lehigh University, Bethlehem, Pa.

May 17-19. Seventy-third annual convention of the American Institute of Architects, in the Yosemite Valley, California.

May 27-28. Meeting of the National Board of Fire Underwriters, commemorating the seventy-fifth anniversary of its founding, at the Waldorf-Astoria Hotel, New York City.

June 16-20. Pacific Heating & Air Conditioning Exposition, to be held in the Exposition Auditorium, San Francisco. The Exposition, under the auspices of the American Society of Heating & Ventilating Engineers, is to be held in conjunction with the summer meeting of that Society.

DIED

WILLIAM P. KATZ, 53, architect, in Yonkers, N. Y. A native of Yonkers, Mr. Katz attended Columbia University, Cooper Union and the National Academy of Design. During the war, he designed and supervised construction for the War Department at the Presidio of San Francisco, Army Headquarters in California, and on the Mexican border. An associate architect of the Mulford Gardens project in Yonkers, he also designed the First National Bank Building, the Yonkers Health Center, Public School 24, the 3rd Precinct Police Station and the Park Building in that city.

DR. MICHAEL MIKKELSEN, 75, in New York. Born in Wisconsin, he attended the public schools of that state and received a Doctorate in Philosophy at Johns Hopkins University. After studying for the ministry, he joined the staff of The Architectural Record in New York and later became its editor. He had been a vice president of the F. W. Dodge Corporation and a vice president and director of the Real Estate Directory Company, Inc.

GEORGE F. DRISCOLL, 69, contractor, at Brooklyn, N. Y. Born in Brooklyn, he began work as an apprentice bricklayer when he was eleven years old. His firm, the George F. Driscoll Company, founded in 1901, has just been named to work jointly with the Walsh Construction Company on the new Army base at Trinidad, British West Indies. It is also presently at work on the construction of the Federal Office Building at Arlington, Va. Among the structures built by the company in New York City are the Abraham Lincoln, John Adams, Grover Cleveland and Andrew Jackson High Schools, the Bronx County jail, Kings County Nurses Home, the Jamaica Sewage Treatment Works, the New York Parcel Post Building, and the Canal Street post office. The firm also built several sections of the West Side Highway and more recently was engaged in construction of the East River housing development.

ADMIRAL CHRISTIAN JOY PEOPLES, 64, in Washington, D. C. Admiral Peoples, who retired from the Navy on November 1, after forty years of service, was regarded for many years as the Navy's leading expert on purchase and supplies. A rear admiral in 1917, he won the Navy Cross for "exceptionally meritorious service" for feeding and clothing the Navy during the World War. In 1935, Admiral Peoples was requisitioned to head the Procurement Division of the Treasury Department, which had as one of its major tasks the making of purchases for the $4 billion work relief program. He served as head of the division until 1939. After leaving the Treasury, he was general inspector of the Navy Supply Corps on the Pacific Coast until his retirement. Since November 1, he had been associated with the Todd Shipyards Corporation in Washington. Admiral Peoples developed the purchase system now in use in the Navy and was credited with having standardized the steaming coal and fuel oil system.

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Interior Decorator, Major H. E. Turner.

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2. COMFORT. Finished Terrazzo is *easy to walk on.* It is less slippery than any waxed surface. Furthermore, Terrazzo can save you enough money to acousticate your ceiling, thus giving you a very low noise level.

3. CLEANLINESS. Terrazzo can be sealed so as to be practically non-absorbent. Its smooth, jointless surface *cleans easily*...can harbor no accumulation of macroscopic or microscopic germs. It is aseptic.

4. COLOR AND DESIGN. Terrazzo has warmth and beauty. You may specify *any design* you wish—pictorial or geometric—in virtually *any combination of colors.*

5. DEPENDABLE INSTALLATION. This Association's objective is to see that your Terrazzo installations *turn out exactly as you want them.* Write us today for complete information on the above points or see our advertisement in Sweet's Catalog for basic technical data.

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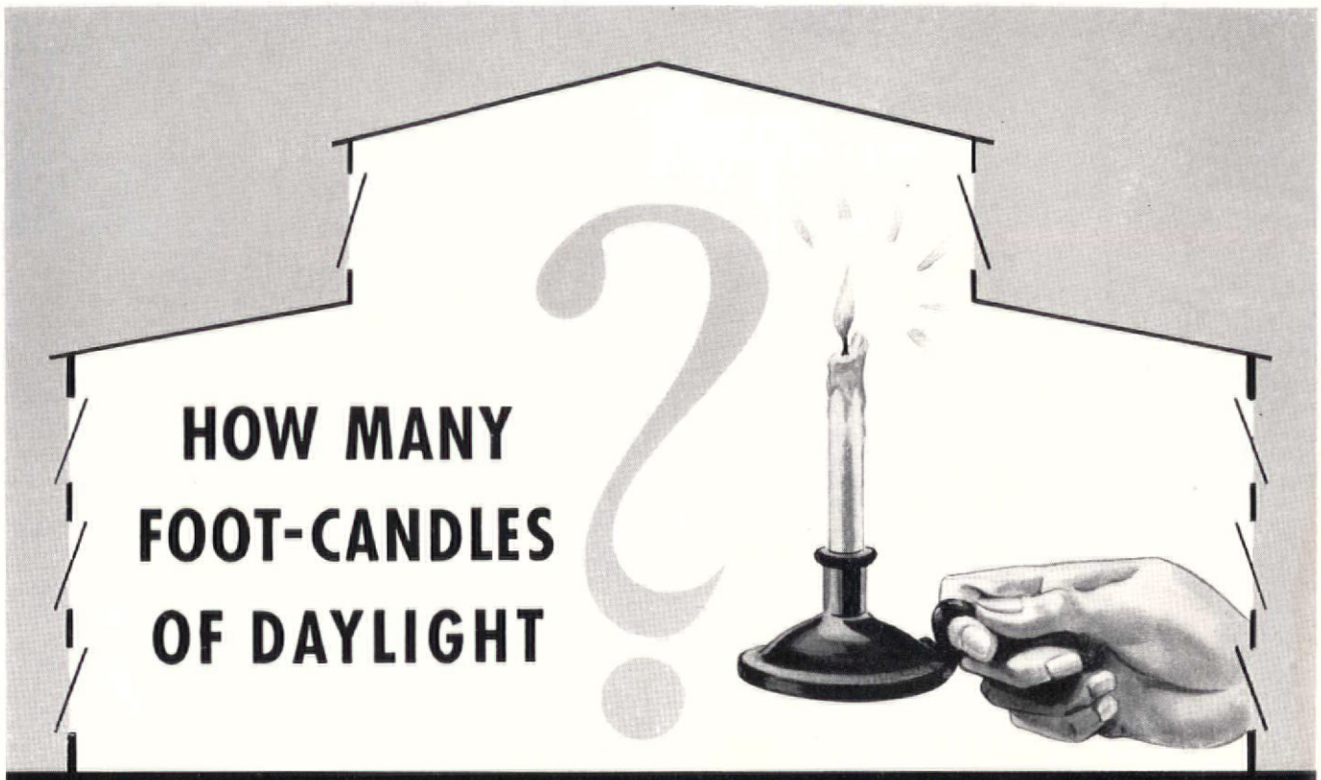

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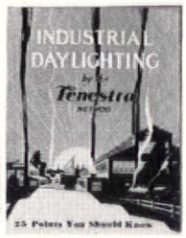
Fenestra Research Engineers in co-operation with the Department of Engineering Research at the University of Michigan have successfully helped many manufacturers solve their daylighting and ventilating problems. They have prepared the two books illustrated below—supplied FREE. Use the coupon.



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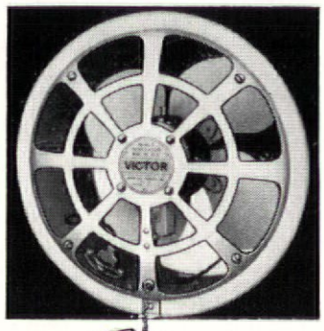
... when the realtor took her thru the new house. But when she saw the modern appointments, particularly the "Victor In-Bilt" Ventilator, Mrs. K smiled approval and another new home was marked "SOLD"



Every housewife wants what Mrs. K wanted in her home — nothing less than a Victor In-Bilt. For the In-Bilt quickly disposes of stale kitchen odors, keeps rooms free from grease and grime, and saves cleaning bills. No home is truly modern without a Victor In-Bilt. Write for catalog describing the complete line of Victor In-Bilt Ventilators. Address:

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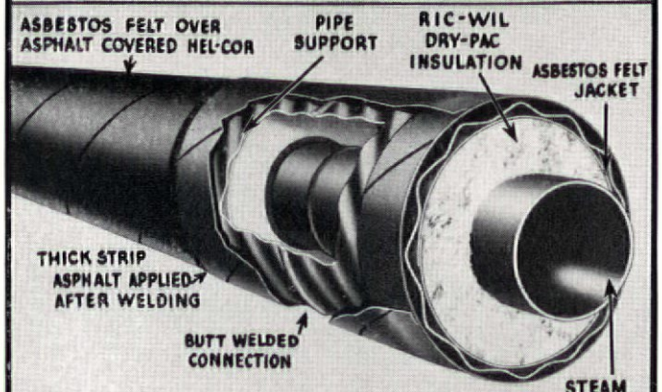

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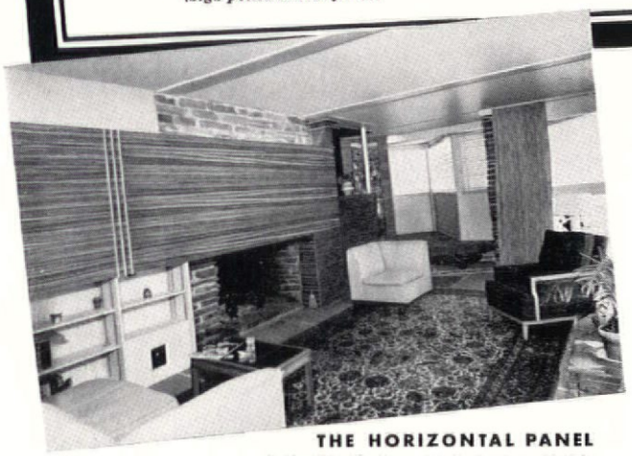

THE HORIZONTAL PANEL
of Marlite Zebrawood gives a highly distinctive note of styling to this modern living room.
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that will please the most critical client . . . and the price-minded ones, too.

Your problem of creating truly smart interiors to fit the small home budget is greatly simplified by Marlite . . . with its highly distinctive beauty and low cost. Where wall treatments require a highly polished mirror effect, Marlite DELUXE is ideal; where walls with a soft velvet-like sheen are desired, there is the new low priced Marlite VELVETEX.

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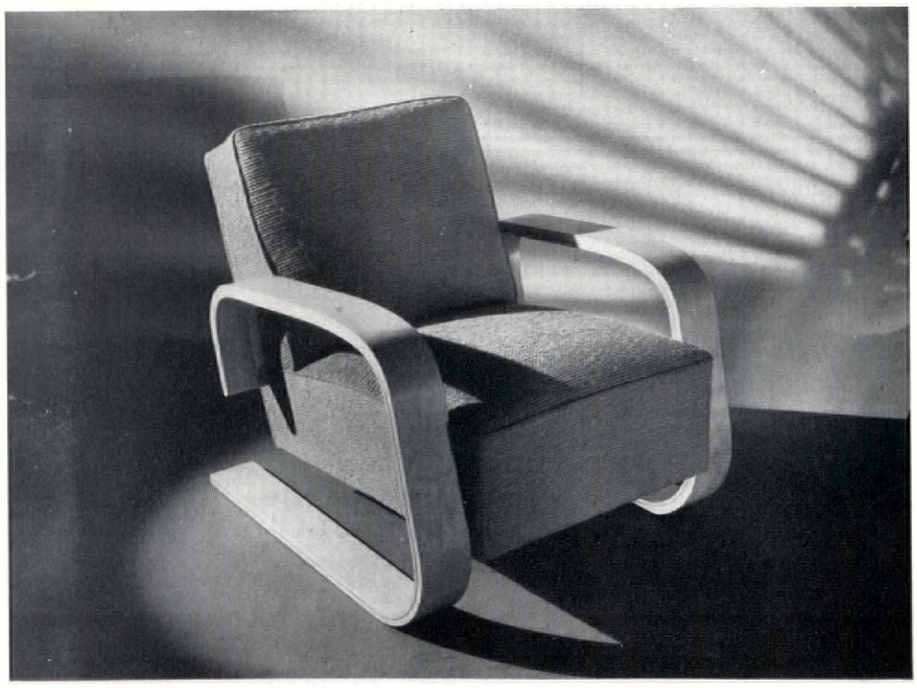
(Continued from page 36)

COLORING, FINISHING AND PAINTING WOOD, by A. C. Newell. The Manual Arts Press, Peoria, Ill. 480 pp., illustrated. 6½ x 9¼. $4.50.

The enlarged edition of one of the best manuals on wood finishing. The new section consists of six chapters which deal mainly with the new quick-drying synthetic finishes, give additional information about more efficient methods of bleaching furniture woods, and discuss practical air-drying finishes for metals. For anyone interested in obtaining good wood finishes, whether architect, cabinet maker or painter, the chief value of the book lies in the fact that not only does it give reliable information on proper methods of surface preparation, paint application, etc., but it also goes into the chemical composition of the various materials and their process of manufacture so that the reasons for the instructions given become perfectly clear. These technical descriptions are well gauged to the capacity of the lay reader, and they are neatly packaged so that they may be shipped if desired.

furniture by AALTO



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SIMPLIFIED CARPENTRY ESTIMATING, by J. Douglas Wilson and Clell M. Rogers. Simmons-Boardman Publishing Corp., New York. 204 pp., 4¾ x 7. $2.50.

A brief manual for the carpenter who is occasionally called on to do estimating, and for the contractor who wishes to improve and speed up his own methods of figuring. The information deals only with houses, and includes not only framing, finishes, etc., but forms for concrete work and hardware. A valuable guide for the architect engaged in small house work, as it presents a series of simple methods which can be used in the drafting room to arrive at estimates more accurate than those obtained by using the conventional cubic or square foot calculations.

ARRANGING FLOWERS, by Margaret Watson. The Studio Publications, Inc. New York. 27 photographic illustrations. 6½ x 8½. $1.50.

A simple treatise on the principles and practice of good flower arrangements, presented in the form of twenty-six illustrated

examples with explanatory text. There is a brief introduction dealing with the proper choice of flowers, their care and the available types of containers.

SIMPLIFIED DESIGN OF ROOF TRUSSES FOR ARCHITECTS AND BUILDERS, by Harry Parker. John Wiley & Sons, Inc. 195 pp. 5¼ x 8. $2.75.

This book is the amplification of a chapter in "Simplified Engineering for Architects and Builders" which was brought out by the same author a few years ago. It was designed as an introduction to roof trusses for those who have had no preliminary training in the subject, and has been prepared so that it is equally suitable for home study. There is an initial section on stresses and simple beam design. Those chapters dealing with trusses cover both steel and timber and include actual examples to illustrate the method of designing common types. Recommended for young architects and engineers preparing to take the state board examination.

(Continued on page 134)

Jake's all set to cut your hair - - - paint your portrait - - - or embalm you!

WE knew a fellow once named Jake who could do practically everything. He was a jack-of-all-trades. But somehow Jake never got to be very good at any one thing.

Now, we believe that this is a free country and a man does not have to specialize in any one line unless he wants to. But we've seen it pay.

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At the same time National has improved all wall and ceiling materials to the benefit of every factor in building. Plaster and lime quality has been stepped up. National has developed purer sources of raw materials . . . perfected new manufacturing methods . . . devised more efficient systems of construction.

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1. With Gold Bond research always on the job in this one field, you will be first to profit from the newest and the best improvements.

2. National's more than 300 representatives can help you select the best materials for any job—and tell you exactly how to use them.

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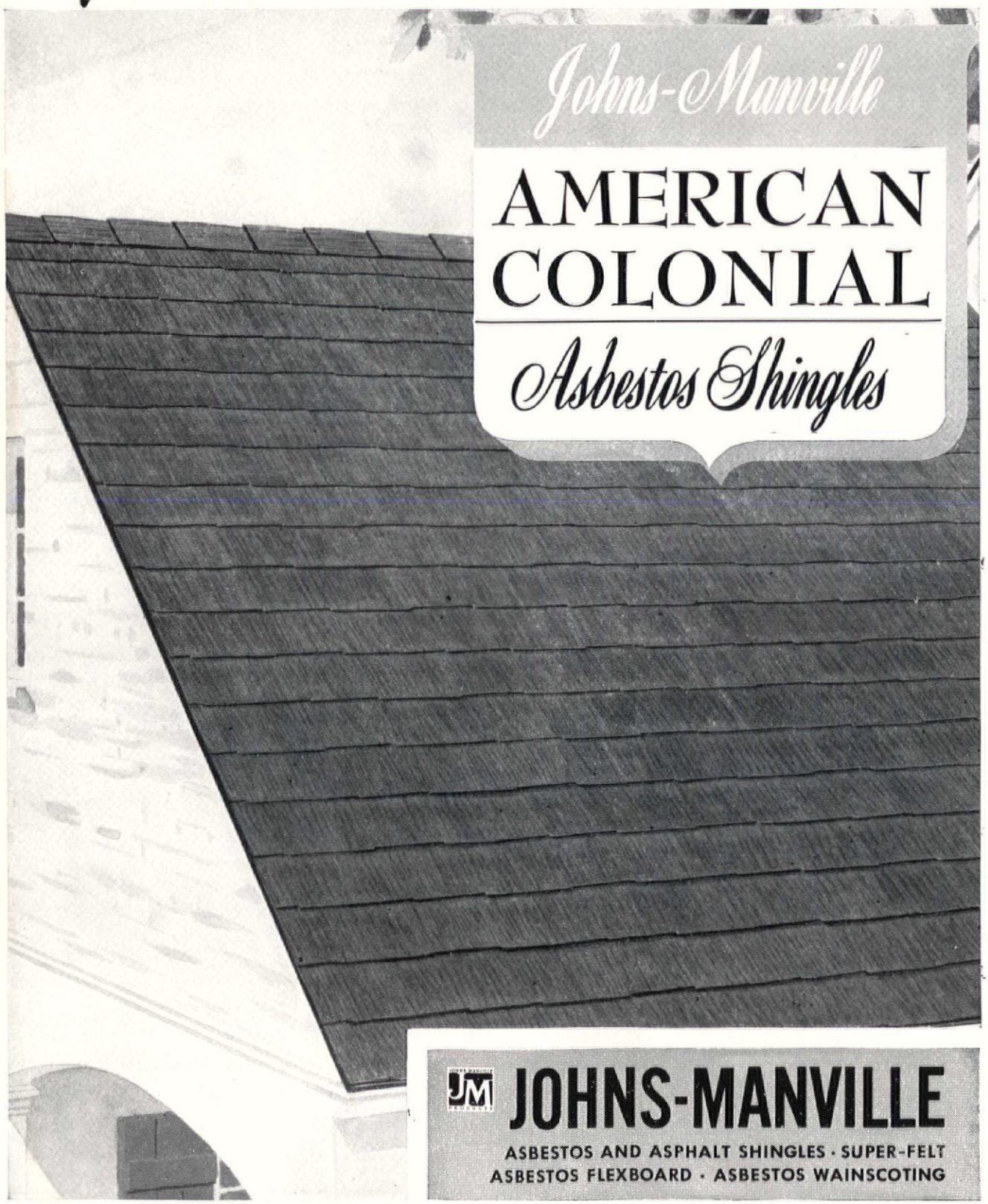
Important Announcement



to Architects—

At the Lowest Price in Johns-Manville History—

For American Method charm in a roof of colorful, fireproof asbestos shingles!

HERE, we believe, is the most outstanding value in J-M's 80 years of experience in the manufacture of roofing materials . . . the Johns-Manville *American Colonial* Asbestos Shingle.

This new shingle combines all the permanence of stone with beauty such as you have never thought possible in a fabricated shingle! Consider these features—

J-M *American Colonial* Shingles provide the texture and graining of fine weathered wood . . . the clean-cut shadow lines that add interest and charm.

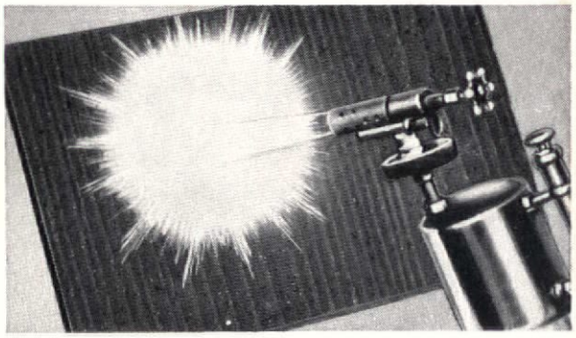
And *color!* Handsome blends . . . a soft green, a warm red, a rich black. Also a natural gray and a white.

As for cost, the new *American Colonial* is priced so low, is so economical to apply, that roofs of this fireproof material cost but *little more than roofs of less satisfactory materials.*

Like all J-M Asbestos Shingles, this new shingle can't burn or rot, is practically impervious to weather. No periodic upkeep is needed . . . no preservative treatment.

Those are the reasons why every client will appreciate your specifying J-M American Colonial Asbestos Shingles. But clients will be particularly grateful as years pass and they learn the economy of having a roof as lasting as the house itself!

BEAUTIFUL . . . You'll really find it hard to believe that the new J-M *American Colonial* Asbestos Shingle is a fabricated material with the permanence of stone. Its texture and graining are those of fine weathered wood. Shadow lines are clean-cut, sharp, interesting. Its dignity of line and simplicity give the roof true American Method appearance!



FIREPROOF . . . Not just fire-resistant, the *American Colonial* Asbestos Shingle cannot burn. It even withstands the terrific heat of a blowtorch!

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Building Materials

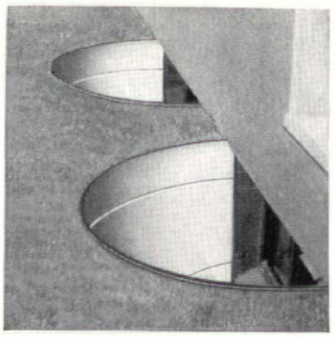
ROCK WOOL HOME INSULATION · INSULATING BOARD · HARDBOARD · ROLL ROOFINGS, etc.

(Continued from page 130)

PRACTICAL JOB POINTERS, by Nelson L. Burbank. Simmons-Boardman Publishing Corporation. 129 pp., illustrated. 8¾ x 11¼. $2.00.

A collection of some 600 ideas on practical building methods, offered to architects, contractors and mechanics as ways of saving time and money. Much of the material is of the gadgeteering variety, such as using the back of a saw as a ruler, salvaging an old pair of suspenders to make a strap to hold a hammer on a carpenter's apron, or the transformation of an old inner tube into a case for a plumb and level. Scattered through the book along with such unimpressive notions are a great number of useful suggestions on the rapid installation or improvement of framing, foundations and concrete forms, interior trim and wall finishes, roofing, etc. Each of the suggestions is illustrated by a line drawing or photograph and is briefly described. Material is organized into about twenty general sections and reference use is further simplified by a complete index.

CUT BUILDING COSTS *these 2 ways*



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Users report savings of up to 50% using low-cost Donley Steel Area Walls. These ready-made, ready-to-install area walls take the place of expensive masonry walls. Donley Area Walls of steel are designed to offer least surface to the action of frost and do not crack or disintegrate. Installed by inexpensive labor—just set them in front of the window and backfill (can be fastened to foundation if desired).

Arch-formed and ribbed for strength, made of 16 ga. copper bearing steel, painted two coats (last coat a special, long life aluminum finish). Carefully crated for protection during shipment.

ATTIC VENTILATORS

Substantial, well-made, these steel attic ventilators are low in first cost and easy to install. In frame construction, all that is necessary is to cut an opening in the sheathing, nail flashing flange to sheathing, butt shingles or side against ventilator body and that's all—no wood trim is required (installation in brick is just as easy).

Complete with bronze fly screen fastened to inside, made of 20 ga. steel, electrically welded, finished with two coats of special paint for double protection. Rectangular shape in 10 sizes up to 18" x 36", also made in half-round and quarter-round shapes.

Get all the facts about these money saving Donley products—send for your copy of the 44-page Donley catalog which tells all about these and 50 other articles to improve and lower home building costs.

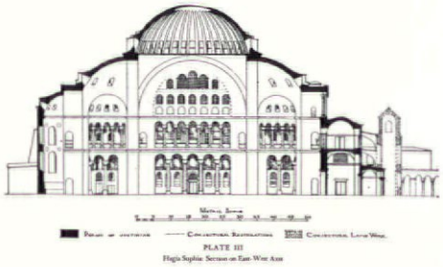
The DONLEY BROTHERS Co.
13945 MILES AVE. • CLEVELAND, OHIO

SEVENTY YEARS OF REAL ESTATE SUBDIVIDING IN THE REGION OF CHICAGO, by Helen Corbin Monchow. Northwestern University. 200 pp. 6¼ x 9¼. $2.25.

An examination of subdividing activity in the vicinity of Chicago, with relation to the need for residential sites, the influence of various institutional factors, population growth, general business conditions, and the development of manufacturing and transportation. The main discovery made was that the supply of lots was enormously in excess of the demand, due to the operation of a speculative motive rather than considered planning for actual use. Another factor of importance is the random development of industries, which is reflected in the unplanned character of real estate expansion. Each of the elements mentioned above is discussed in detail, and while the conclusions are far from surprising, the data presented form interesting reading. At the end of this study the author states: "Not only have subdividers speculated on the gullibility, the land hunger, or the desire for profit by the public, but purchasers also have speculated on the tradition of rising land values in the United States and the prospect of an 'unearned increment.' The result of such unrestricted pursuit of profit is haphazard development, economic waste, and the creation of serious problems of public policy. . . . These are the ones against which measures of control must be directed."

HAGIA SOPHIA, by Emerson Howland Swift. Columbia University Press. 265 pp., illustrated with drawings and photographs. 9¼ x 12¼. $10.00.

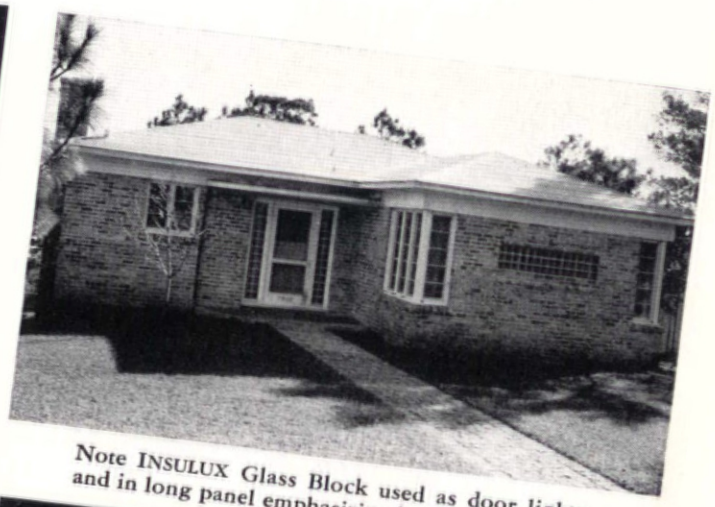
The Church of Hagia Sophia is one of the great architectural monuments of all time, easily ranking with such masterpieces as



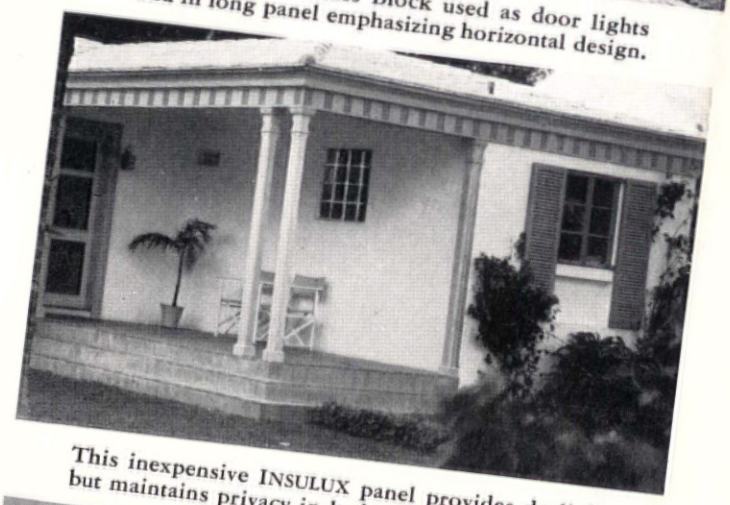
Chartres and the Parthenon. In this handsomely printed monograph of Professor Swift it has received worthy treatment. Every aspect of the building, its structure, history, background, etc., has been comprehensively treated and fully illustrated. Most welcome to the non-archæologically minded reader will be the thoroughly readable text, a far cry from the usual dry assemblage of facts. There is an index, and an excellent bibliography.

Scores of Problems in *Small Home Design* can be solved with OWENS-ILLINOIS INSULUX *Glass Block*

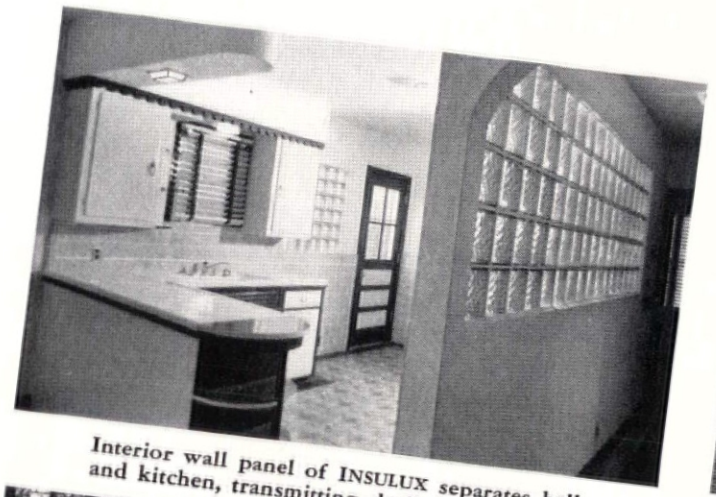
THERE are places in the small home for which INSULUX Glass Block are the logical and economical material. The half-dozen functional and decorative uses shown here indicate the versatility of glass block in the hands of the architect. No other material offers the same combination of advantages: light transmission; high insulation value; privacy; lower sound transmission; freedom of design. The acceptance of INSULUX Glass Block by architects and owners everywhere proves its right to a place in homes of today. Owens-Illinois Glass Company, INSULUX Division, Toledo.



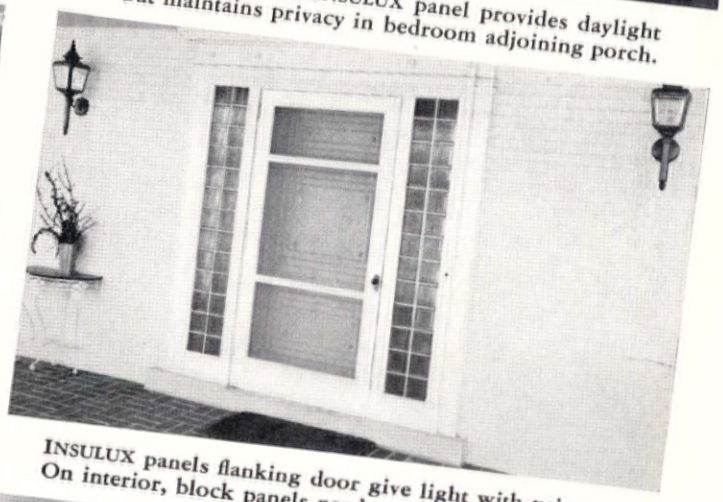
Note INSULUX Glass Block used as door lights and in long panel emphasizing horizontal design.



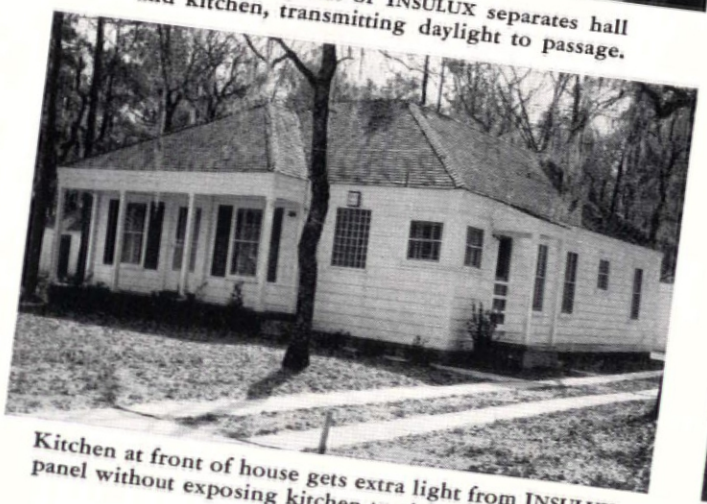
This inexpensive INSULUX panel provides daylight but maintains privacy in bedroom adjoining porch.



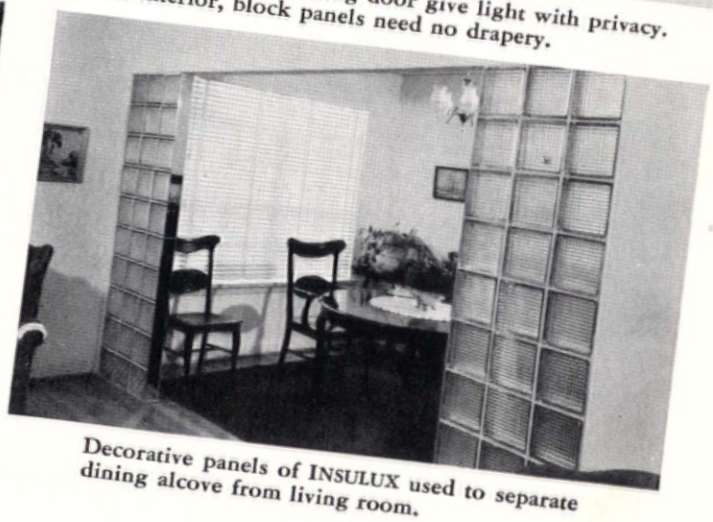
Interior wall panel of INSULUX separates hall and kitchen, transmitting daylight to passage.



INSULUX panels flanking door give light with privacy. On interior, block panels need no drapery.



Kitchen at front of house gets extra light from INSULUX panel without exposing kitchen to visitors.



Decorative panels of INSULUX used to separate dining alcove from living room.

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to increase the span of service of

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—to give them even greater durability, laboratory research has developed minimum standards of *toxic preservation*. Such treatment assures purchasers of long-standing and satisfactory service, even under the severe requirements of modern construction.

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FOR FURTHER INFORMATION SEE OUR CATALOG IN SWEET'S

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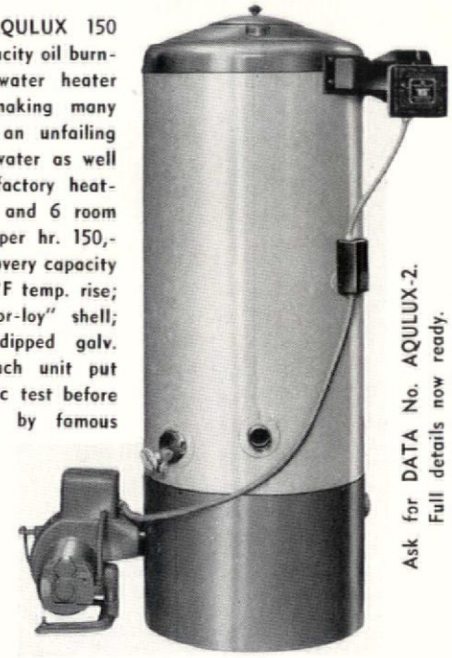
The Johnson AQULUX 150 is the large capacity oil burning automatic water heater that is now making many new friends as an unfailing source of hot water as well as a very satisfactory heating unit for 5 and 6 room houses. Output per hr. 150,000 BTU or recovery capacity 180 gal. at 100°F temp. rise; 10 gauge "Copr-loy" shell; 3/16" heavy dipped galv. steel heads; each unit put under hydrostatic test before assembly; fired by famous "Bankheat" burner. Basement installation often not necessary for satisfactory performance. Consult our engineers.



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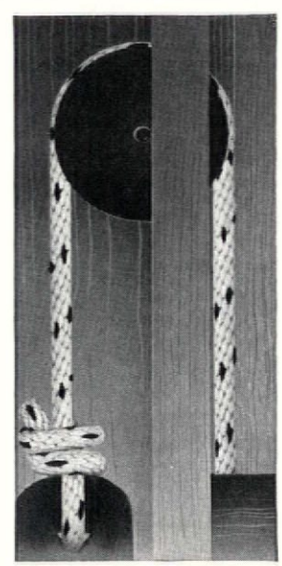

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Architects specify and builders generally prefer Samson Spot Sash Cord — identified by Colored Spots (Reg. U. S. Pat. Off.)

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Elsie N. SAYS:

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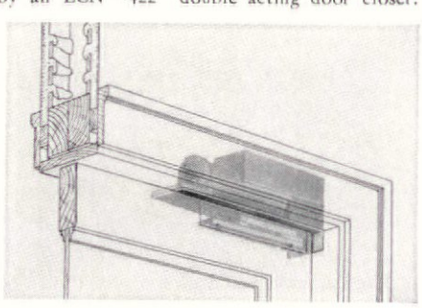
"This double acting closer gives them perfect control"

The LCN "422" is Concealed Overhead, Allows No Free Swinging, is Made for Long Life

The simple, good-looking kitchen — dining room door shown above, in one of the up-to-date houses by George Fred Keck, architect, of Chicago is controlled by an LCN "422" double acting door closer. Hidden in the head frame and top of door, up away from scrub water and floor dirt, this device does a superior job. Its full rack-and-pinion, hydraulic action prevents annoying free swings and "slaps," keeps the door always controlled, and brings it to a quiet close on center, without the "flip-flap" commonly found in these doors. Its simple center pivot mounting avoids cutting of floors and simplifies fitting the floor coverings. Hold-open feature, both ways, is standard.



See the LCN Catalog in Sweet's, Section 16-27

These 16 pages of useful data give the answers to most problems of swing door control. If Sweet's isn't handy, or you'd like a separate LCN catalog anyway, we'll promptly send it. Norton Lasier Company, 472 West Superior Street, Chicago, Illinois.

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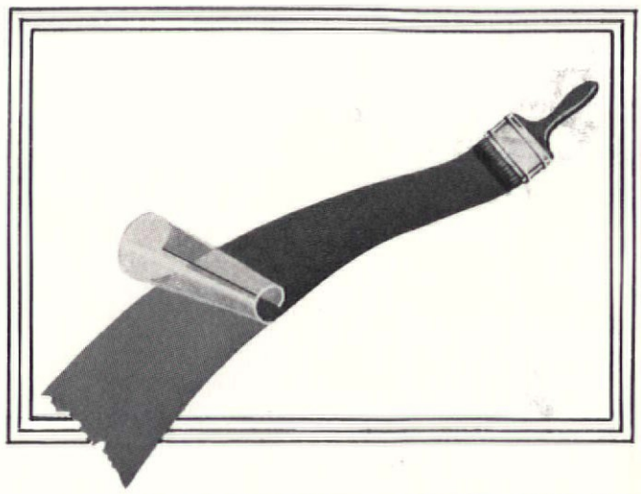

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Recreation Room paneled in Tufraw Rawhide. Interior Decoration by Marshall Field & Company, Chicago.

PLAN YOUR INTERIORS IN Tufraw *Rawhide*

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The beautiful, natural markings of Tufraw Rawhide add charm to any interior. Use it on your next assignment. Free samples in the Natural and in colors sent on request. Address Dept. AF4.

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Manufacturers of Quality Leathers for Over Half a Century
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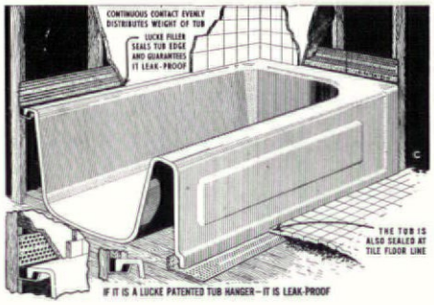
. . . for example he specified the

LUCKE LEAK PROOF *Bath Tub Hanger"*

Because the LUCKE Bath Tub Hanger is guaranteed to keep bathtubs from leaking, it is a feature well worth advertising in his new homes. He can assure the owner that the wall around bathtub will never crack, will never leak, that he will never have to spend any money on repairs. My architect's reputation is built in demanding the best installations.



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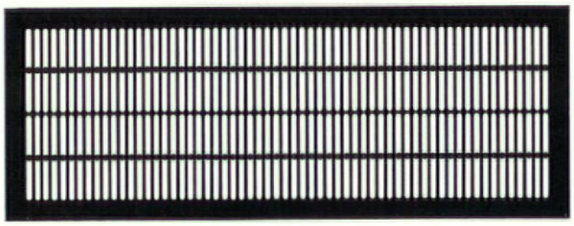

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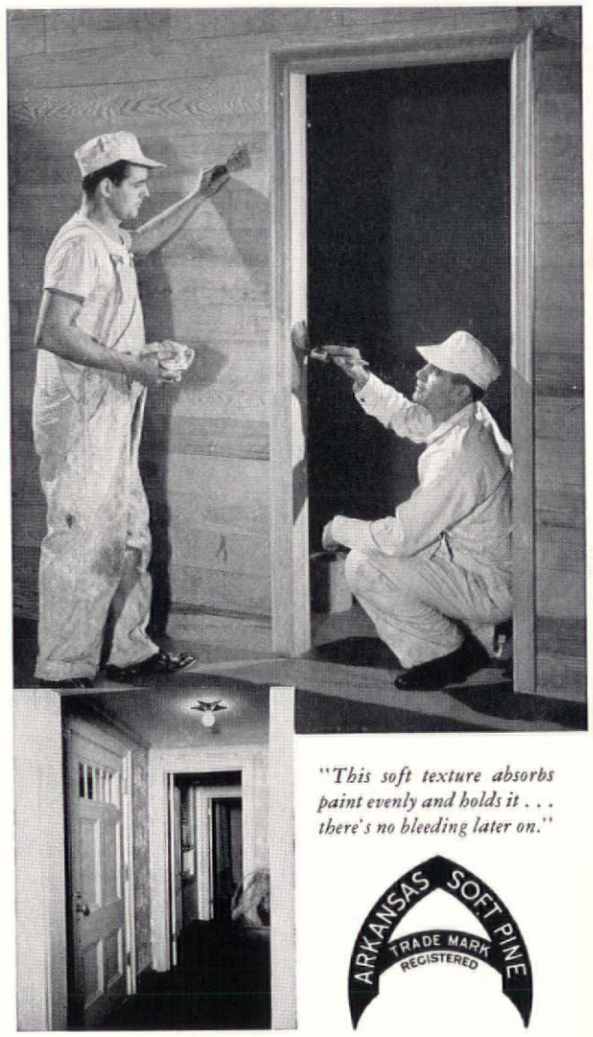

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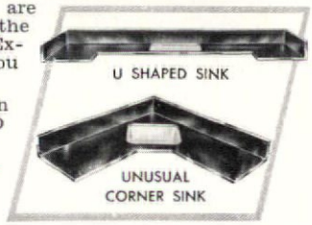

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(Thermosaire Fireplace is the Covert complete fireplace that circulates heated *fresh* air . . . no drafts . . . no smoking . . . moderate in cost. Shall we include facts about it?)

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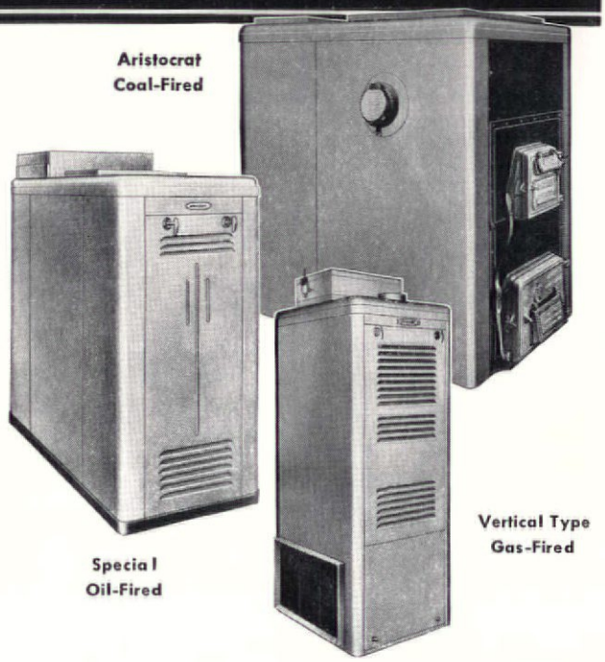

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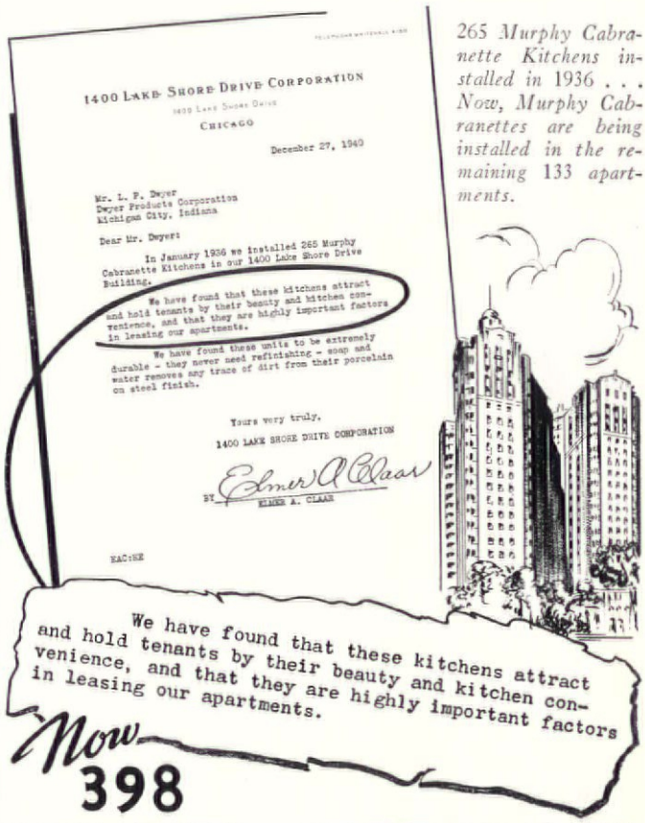
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December 27, 1940

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Dear Mr. Dwyer:

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We have found these units to be extremely durable - they never need refinishing - soap and water removes any trace of dirt from their porcelain on steel finish.

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INSTALLED IN THIS OUTSTANDING BUILDING

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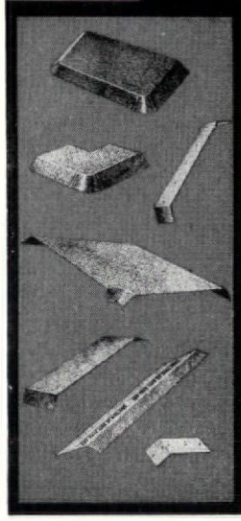

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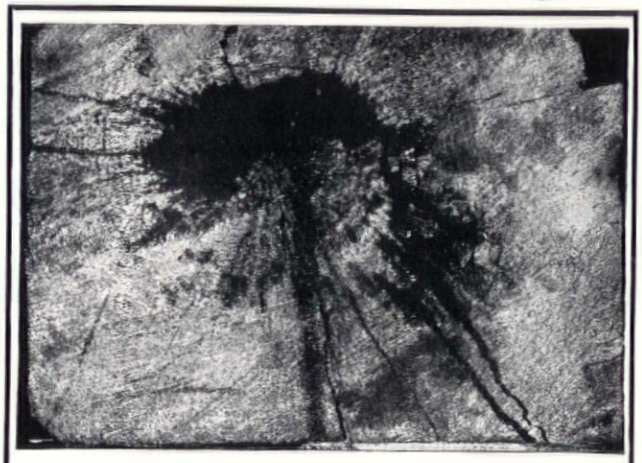

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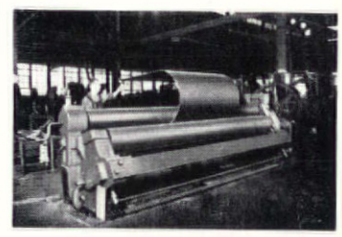

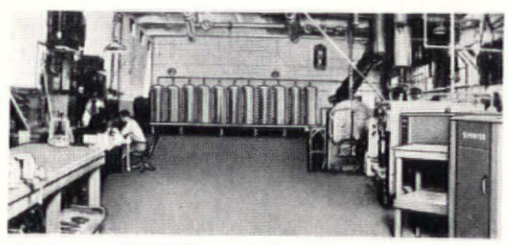

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Adam, Frank Electric Co. ....opp. p. 72
Alberene Stone Corporation of Virginia 63
Aluminum Company of America 24, 25
American Air Filter Co., Inc. 119
American Brass Company, The 59
American Lumber & Treating Co. 60
American Rolling Mill Company, The 30
American Steel & Wire Company 145
(United States Steel Corporation Subsidiary)
American Telephone & Telegraph Co. 92
Anchor Post Fence Company 80
Anderson Corporation 48
Arco Company, The 128
Arkansas Soft Pine Bureau 139
Armstrong Cork Company ....opp. p. 65, 74
Arrow-Hart & Hegeman Electric Co., The 115
Artek-Pascoe Inc. 130
Auer Register Company, The 56

Borg-Warner Corporation 23
(Ingersoll Steel & Disc Division)
Boro Wood Products Co. 140
Bruce Co., E. L. 53
Brunswick-Balke-Collender Co., The 96
Burnham Boiler Corporation 122
Byers, A. M. Company 13

Cabot, Samuel, Inc. 104
California Redwood Association 92
Carey, Philip Company, The 91
Carnegie-Illinois Steel Corporation 145
(United States Steel Corporation Subsidiary)
Case & Son, W. A. Manufacturing Co. 62
Ceco Steel Products Corporation 9
Celotex Corporation, The ....Cover II
Church, C. F., Mfg. Co. 104
Columbia Steel Company 145
(United States Steel Corporation Subsidiary)
Columbus Coated Fabrics Corporation 82
Congoleum-Nairn, Inc. ....opp. p. 73
Consolidated Expanded Metal Companies, The 83
Covert Co., H. W. 140
Crane Co. 46
Curtis Companies 87

Davidson Enamel Products, Inc. 17, 142
Detroit Steel Products Co. 127
Donley Bros. Co. 134
Douglas Fir Plywood Association .... opp. p. 33
Du Pont, E. I. De Nemours & Co., Inc. 143
(Grasselli Chemicals Department)
Dwyer Products Corp. 141

Eagle-Picher Lead Company, The 49
Edison General Electric Appliance Co., Inc. 22, 146
Electro Metallurgical Company 7
Eljer Co. 82

Federal-American Cement Tile Co. 27
Fitzgibbons Boiler Company, Inc. 50
Fleur-O-Lier Manufacturers 69
Flintkote Company, The 54
Formica Insulation Company, The 5
Frigidaire Division 73
(General Motors Sales Corp.)

Gar Wood Industries, Inc. 84
General Electric Company 35, 51, 99, 109
General Motors Sales Corp. 73
(Frigidaire Division)
Goodyear Tire & Rubber Company, The 37
Grasselli Chemicals Department 143
(E. I. Du Pont De Nemours & Co., Inc.)
Grinnell Company, Inc. 38
Gutmann and Company, Inc. 138

Hallenscheid & McDonald 33
Haskelite Manufacturing Corporation 76, 77
Hendrick Manufacturing Co. 138
Henry Furnace & Foundry Company, The 141
Hotstream Heater Company, The 80
(Borg-Warner Corporation)

Ingersoll Steel & Disc Division 23
Ingram-Richardson Manufacturing Co. 19
Insulite Company, The 41
Iron Fireman Manufacturing Company 96

Jenkins Bros. 107
Johns-Manville 85, 132, 133
Johnson, S. T. Co. 136
Johnson Service Company 66

Kaufman & Fabry Co. 140
Kawneer Company, The 11
Keasbey & Mattison Company ....opp. p. 308, 65
Kennedy, David E., Inc. 6
Kimberly-Clark Corporation 57
Kinnear Mfg. Co., The 68

Kitchen Maid Corporation, The 128
Knape & Vogt Manufacturing Co. 138
Kohler Co. 55

Lawson, F. H. Company, The 98
Libbey-Owens-Ford Glass Co. 116, 117
Louisville Cement Co. 8
Lucke, William B., Inc. 138

Marsh Wall Products, Inc. 129
Masonite Corporation 3
Medusa Portland Cement Co. 95
Mengel Co., The 111
Mesker Bros. 61
Miami Cabinet Division 81
(The Philip Carey Company)
Milcor Steel Company 64
Miller Company, The 45
Modine Manufacturing Company 47
Monarch Metal Weatherstrip Corporation 72
Mullins Mfg. Corp. 142
(Youngstown Pressed Steel Division)
Muralo Company, Inc., The 137

National Door Manufacturers' Association 136
National Gypsum Company 131
National Lead Company 58
National Terrazzo and Mosaic Association, The 126
National Tube Company 145
(United States Steel Corporation Subsidiary)
Norton Lasier Company 137

Owens-Illinois Glass Company 135
Overhead Door Corporation .... Cover IV

Pacific Steel Boilers 31
(Division of United States Radiator Corporation)
Paine Lumber Company, Ltd. 28, 29
Parker Rust-Proof Company 97
Payne Furnace & Supply Co., Inc. 94
Pecora Paint Company, Inc. 102
Penberthy Injector Company 15
Philco Radio & Television Corporation 26
Pittsburgh Corning Corporation 108
Pittsburgh Plate Glass Company 71, 78
Pittsburgh Plate Glass Company, Paint Division 93
Ponderosa Pine Woodwork 39
Portland Cement Association 101
Pratt & Lambert, Inc. 42, 43
Price Bros. Co. 118

RCA Manufacturing Co., Inc. 121
Reading Hardware Corporation 75
Red Cedar Shingle Bureau 21
Republic Steel Corporation 103
Revere Copper and Brass, Incorporated 113
Rie-Wil Co., The 128
Richmond Screw Anchor Company, Inc. 90
Rowe Manufacturing Co. 40
Russell, F. C. Company, The 136
Rybolt Heater Co., The 86

Samson Cordage Works 136
Servel, Inc. 67
Shellac Information Bureau 70
Sisalkraft Company, The 114
Smith, H. B. Co., Inc., The 120
Sonneborn Sons Inc., L. 100
Spencer Heaters 143
Stanley Works, The 100
Stewart Iron Works 142
Surface Combustion Corp. 52

Tile Manufacturers Association 32
Tile-Tex Company, The 106
Timber Engineering Company 142
Trane Company, The 105
Trinity Portland Cement Company .... opp. p. 32
Truscon Steel Company .... Cover III
Tylac Company 124

United States Plywood Corporation 125
United States Radiator Corporation 31
(Pacific Steel Boilers Division)
United States Steel Corporation 89, 145
Universal Atlas Cement Co. 89
(United States Steel Corporation Subsidiary)

Van Range, John, Co., The 84
Victor Electric Products, Inc. 128

Weis, Henry Mfg. Co., Inc. 124
Western Shade Cloth Co., The 88
Westinghouse Electric & Manufacturing Co. 123
Weyerhaeuser Sales Company 79
Wiremold Company, The 112
Wood Conversion Company 34

York Ice Machinery Corporation 110
Youngstown Pressed Steel Division 142
(Mullins Mfg. Corp.)

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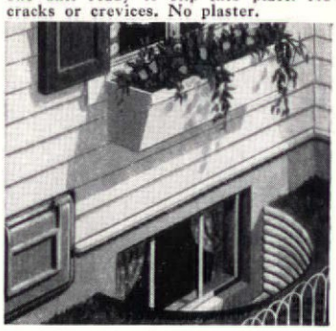

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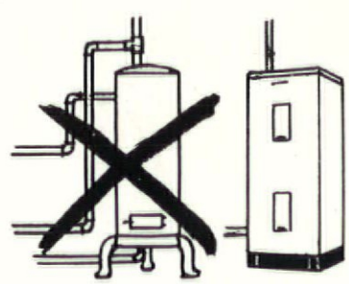

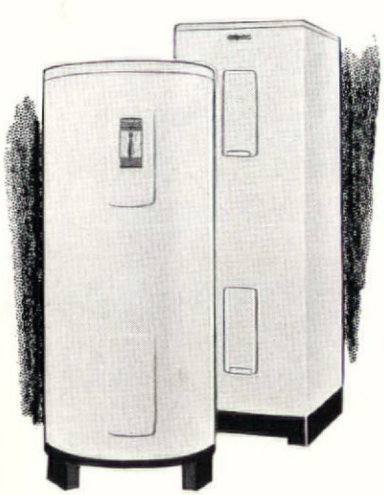

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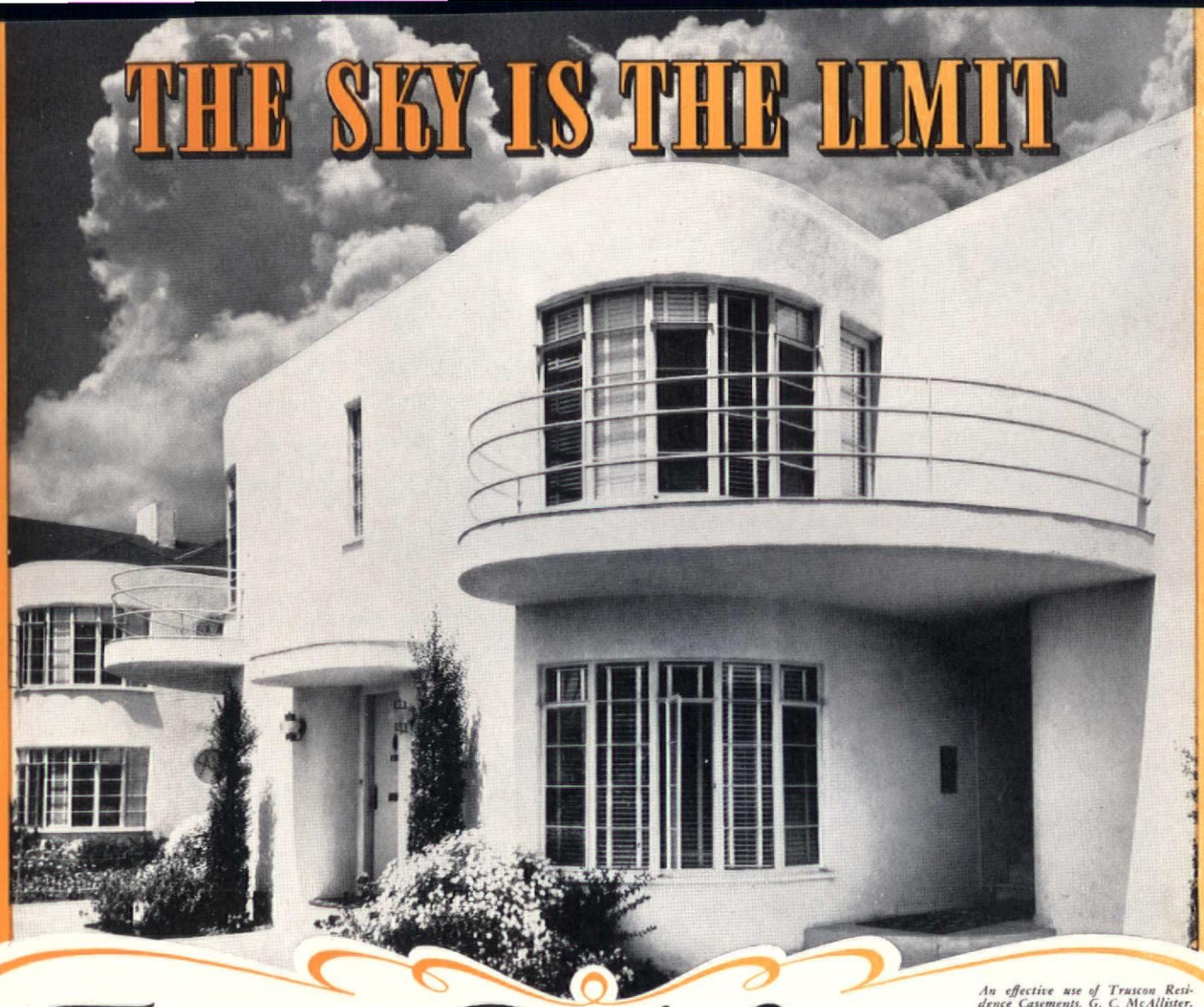

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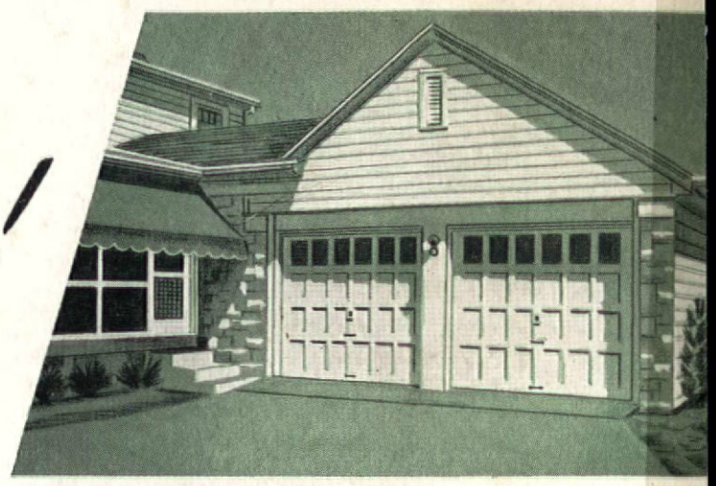

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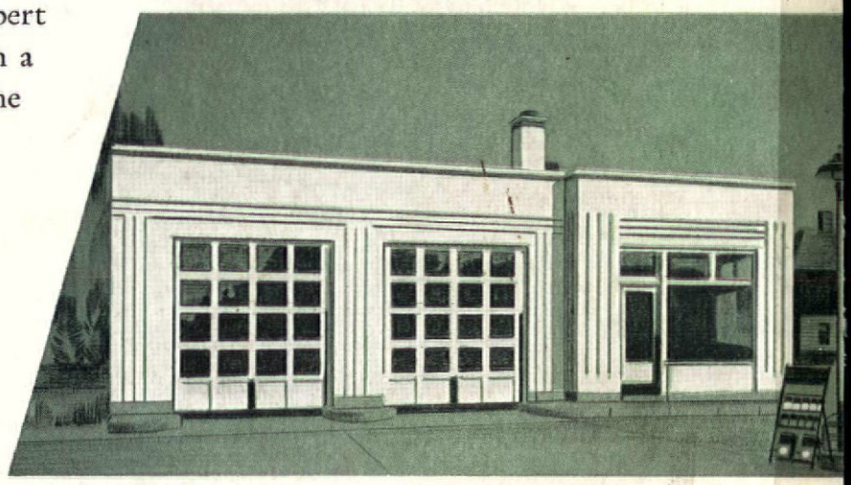

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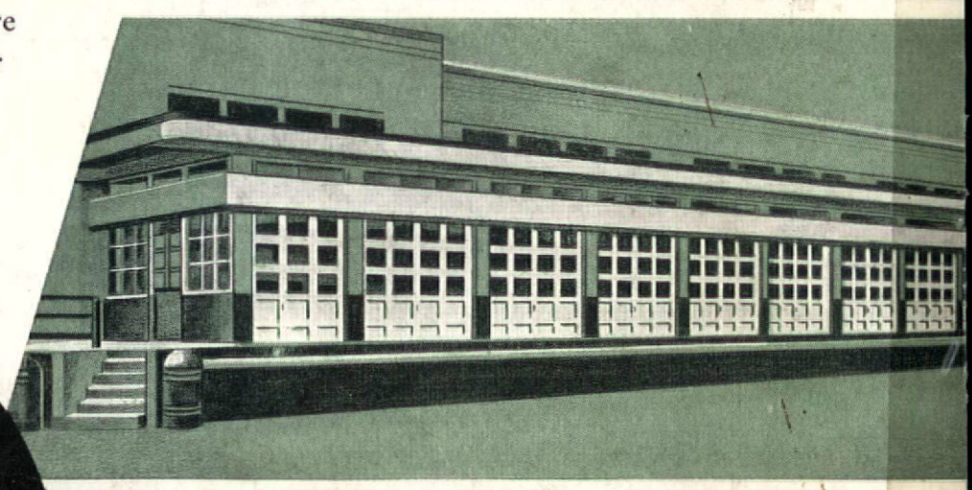

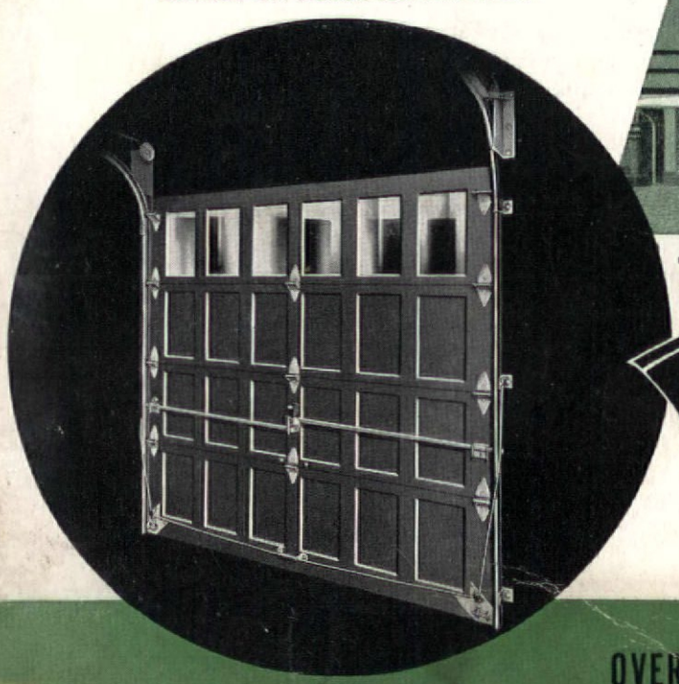

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