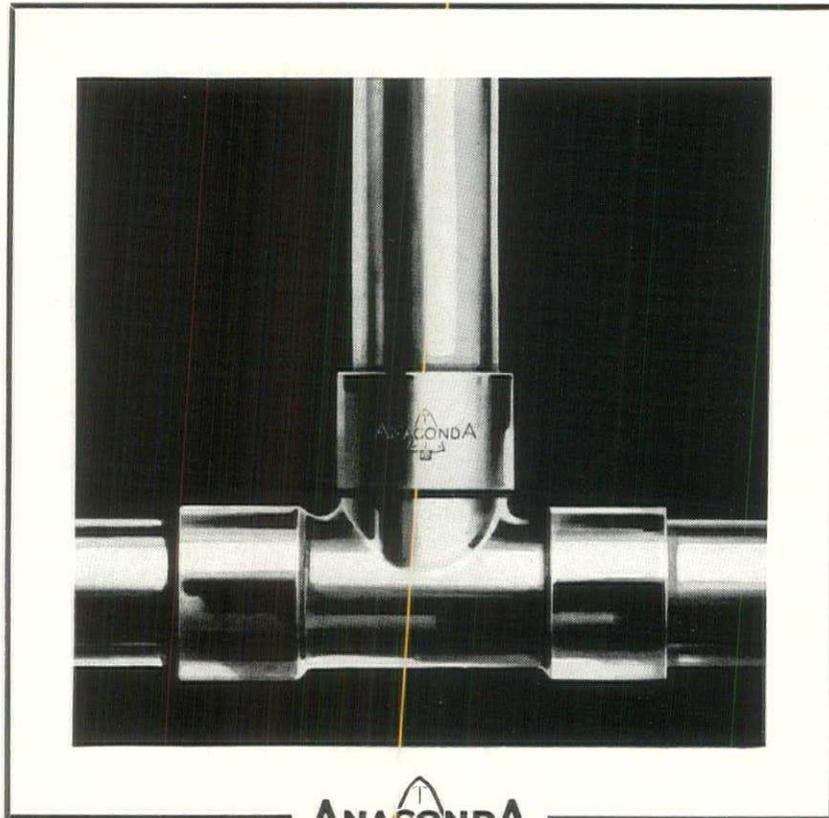


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KENNETH KINGSLEY STOWELL, A.I.A.,
Editor

CARL MAAS
Managing Editor

ROGER WADE SHERMAN,
Technical Editor

TYLER STEWART ROGERS,
Director of Technical Service

R. F. GARDNER,
General Manager

T. W. TOWLER,
Advertising Manager

JAMES A. RICE,
Western Manager

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PHOTO: WIDE WORLD

President Roosevelt grins gleefully on the occasion of laying the cornerstone of the Department of Interior's new twelve million dollar building. The upraised trowel was used by George Washington when he placed the cornerstone of the capital in 1793

RELIEF OVERSHADOWS

• Today the question of relief overshadows all National problems. With 25,000,000 American citizens living on relief, (approximately one-fifth of the total population), with the annual cost of carrying this load now more than \$2,000,000,000 annually, the biggest question in Washington is: "Where will it all end?"

And at the moment there is no answer. Chiefly because the Administration has dedicated itself to the proposition that no one shall starve, the unemployed throughout the country have come to regard relief as a "vested right" made sacred by constitutional law—and, what is worse, succeeding administrations are likely to find themselves obliged to acknowledge this belief.

Everyone wants to know why unemployment, the basic cause of relief, has not decreased. Business is better; shops, markets, and factories once more are figuring in black ink. But the relief bugaboo is as big an ogre as ever. And except for those who believe that the unemployed have lost forever the desire to work, no one is willing to suggest a solution to unemployment and relief problems.

Naturally, owing to the failure of NRA, PWA, CWA, and WPA to put permanent dents in unemployment rolls, there is a growing sentiment in Washington to discard this costly work relief in favor of direct relief (the dole). Looking at the statistics, advocates of

"dole" relief say: "unemployment is here to stay. There will be a permanent relief problem. We can't afford an annual drain on the Federal Treasury of from \$1,500,000,000 to \$2,000,000,000. We might be able to stand a yearly outlay of from \$700,000,000 to \$1,000,000,000, the cost of direct relief. Hence, let's have the 'dole.'"

Despite this argument, it is not likely that the Federal Government will immediately make the suggested policy shift. Even though President Roosevelt stated, in his Baltimore speech, that "recovery would not be sufficient to solve the growing problem of unemployment," the New Deal doubtless will continue to stand by the principles of the more expensive work relief. Sensing this opposition, "dole" advocates probably will make no attempt now to change the whole philosophy of administering relief. For the time being at least they will concentrate their direct relief attack on the 243,000 "white collar" workers—the so-called boondogglers. Even in the face of New Deal opposition there is strong possibility that minority leaders, by so spear-heading their attack, may make the white-collar unemployed the first to face the dole.

Sizing up the relief question now, therefore, three facts are apparent:

(1) That despite work relief, total unemployment has not decreased materially;

(2) That there is a definite trend in sentiment, not backed by the New Deal, toward direct "dole" relief;

(3) That there is a possibility that work relief, which for the last three years has been a major factor in the construction industry, may be near the end of the line.

In the face of this criticism of relief methods the President placidly continues to maintain his stand that "The ultimate cost of the Federal Works program will be determined by private enterprise." But definite and final as this statement seems, there is an apparent shift in the President's attitude. For each of his answers to questions about relief are now tempered by the phrase: "at least for the time being." Taking this statement with a grain of salt, it can easily be seen that the President may do an "about face" on the relief problem before communities, politicians, and political hangers-on join the unemployed in the belief that relief is their incontestable privilege.

HOUSING PROJECTS

• Federal Housing Administrator McDonald spent a busy month in April. For not only did he conclude plans for the large scale housing project at Meadville, Pa., but he also issued commitments on a similar project in Wilmington, Del. Toward the end of the month, therefore, he appeared to be in a rather expansive mood about FHA—and well he might have been. Said he:

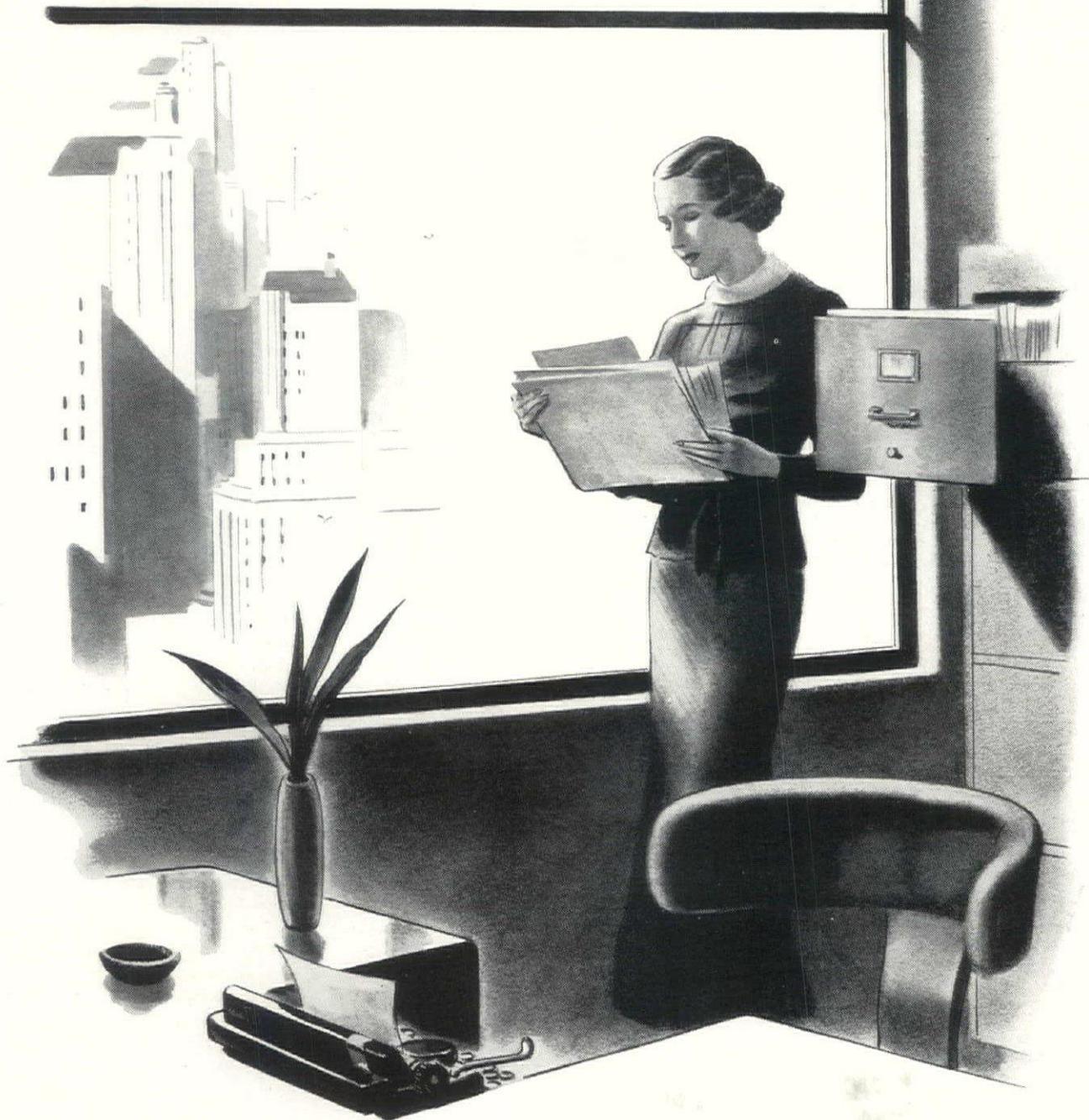
"Construction of the Meadville project, which will begin at once, clearly demonstrates what can be done under the National Housing Act to produce at low rentals, types of dwellings meeting the needs and traditions of the people occupying them. The houses in this project will be rented at an average low rate in the neighborhood of \$7 to \$8 per room.

Here there has been no effort to impose upon a community a type of housing foreign to the character of the locality. Meadville is a city of houses. This project is one consisting of houses. The land was laid out by a Meadville engineer and the dwellings designed by Meadville architects, E. A. and E. S. Phillips. It is distinctly what Meadville wants and needs, and yet, it falls within the classification of low-cost housing. These houses are substantial in construction, ample in accommodation and equipped in a thoroughly up-to-date manner. Yet they may be occupied by families whose incomes are less than \$2,000 a year."

The Meadville project, conceived by a group of public-spirited citizens of the Pennsylvania city, is privately financed, operated, managed, and planned. The

(Continued on page 4)

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\$800,000 mortgage, insured by FHA, was made at a four per cent rate and will run for 30 years. It is approximately 80 per cent of the appraised value of the property.

Meantime, commitments were issued for the "Park View Apartments" project in Wilmington. The New York Life Insurance Company took an insured mortgage on the project for \$510,000—interest rate at 4½ per cent for thirty years. It is expected that the 168 dwelling units can be erected at a cost of \$638,200.

Occupying a two-block area, the building will be three stories high, semi-fireproof, "walkup," containing 528 rooms. Rentals will average \$14.50 per room, considered low in the Delaware community. Construction is expected to begin in about thirty days.

ENTHUSIASM

• New York City's Mayor F. H. La Guardia took time off from his desk duties one warm April morning recently to dip the first concrete for the foundations of Ten Eyck Houses—the government's largest slum-clearance project located in the Williamsburg section of Brooklyn. With him to the \$12,783,000 PWA financed project went Tenement Commissioner Langdon Post, PWA official Dwight L. Hoopingarner, Nathan Straus, and Mrs. Mary K. Simkhovitch.

Possibly somewhat moved by the presence of so many low-cost housing enthusiasts, Mayor La Guardia called Ten Eyck Houses "one of the most important accomplishments of the Roosevelt administration"—styled the Wagner Bill "the most important piece of legislation before Congress."

Mr. Hoopingarner estimated that the last of the 1,625 families who will live in the new development will have been moved in before the end of 1937. Demolition of old buildings on the 23 acre tract is nearly completed, while about a quarter of the excavation is done.

GOVERNMENT ORDERS

• Director of Housing A. R. Clas recently announced that "industries producing building materials are receiving more orders to go into PWA slum clearance and low-rent housing projects than they received from all private residential construction in the 257 leading cities in the country in 1934." And that, despite the statement that only three per cent of Manhattan's 1935 building total came from Federal work, seems to show that Uncle Sam is still a buyer to be reckoned with in the construction field. In fact, this year he will

spend something more than \$50,000,000 on the production and fabrication of materials.

Here are a few of the totals of government orders: 120,000,000 common brick; 2,510,000 square feet of sash and an equal amount of window glass; 2,000,000 square feet of metal lath; 1,400,000 barrels of cement; 13,000,000 square yards of paint.



PHOTO: UNDERWOOD & UNDERWOOD

Madame Secretary Perkins engages in a confidential off-the-record chat with interested Senator Wagner during a recent meeting on the Wagner-Ellenbogen Housing Bill

WAGNER-ELLENBOGEN HOUSING BILL

• During the last four months the question of low-cost housing has been repeatedly paraded before the general public. At times a solution has seemed imminent; occasionally all hope has appeared to be lost. Now, after long weeks of haggling, the forces of private enterprise and the proponents of Federal subsidy have found grounds for compromise. The result is the Wagner-Ellenbogen Housing Bill, pending in both houses of Congress, which may take another first step in filling the need for adequate housing of low income groups.

Definitely a compromise between public and private enterprise, the new housing bill really is a victory for the advocates of Economy. Primarily it is intended to promote the elimination and replacement of slums and will have little or no effect on the building of separate family dwellings in the small towns and rural regions. Senator Wagner's compromise bill also aims at decentralizing the Federal Housing activities and at putting as much responsibility as possible on State and local housing agencies.

Under the new bill, the Housing Division of PWA will be replaced by a new agency to be called the United States Housing Authority. Four salaried members, with the Secretary of

the Interior serving ex-officio, will comprise the force.

Work handled by the proposed authority would include:

(1) Loans and grants to public housing agencies for slum clearance and low-rent housing;

(2) The development of demonstration projects. Both of these tasks already have been performed by PWA. Chief differences between PWA and the new Authority are that the Wagner bill places greater emphasis on local initiative, provides a permanent rather than an emergency program, and allows the Federal grant to be spread over as long as sixty years instead of PWA's plan of payment in lump sum.

Terms of the new bill further state that "the proposed Housing Authority may make a grant to any public housing agency for low-rent housing to the extent of 45 per cent of the cost of developing or acquiring the property, but in any case the amount must be enough to assure the low-rent character of the project." In addition to this grant, the Authority may also lend up to 55 per cent of the value of the project; the beneficiaries, therefore, need pay nothing down. It is assumed that occupants of the low-rent projects will be subjected to something like the English "means" test to make sure that they can pay no more than the low rents charged.

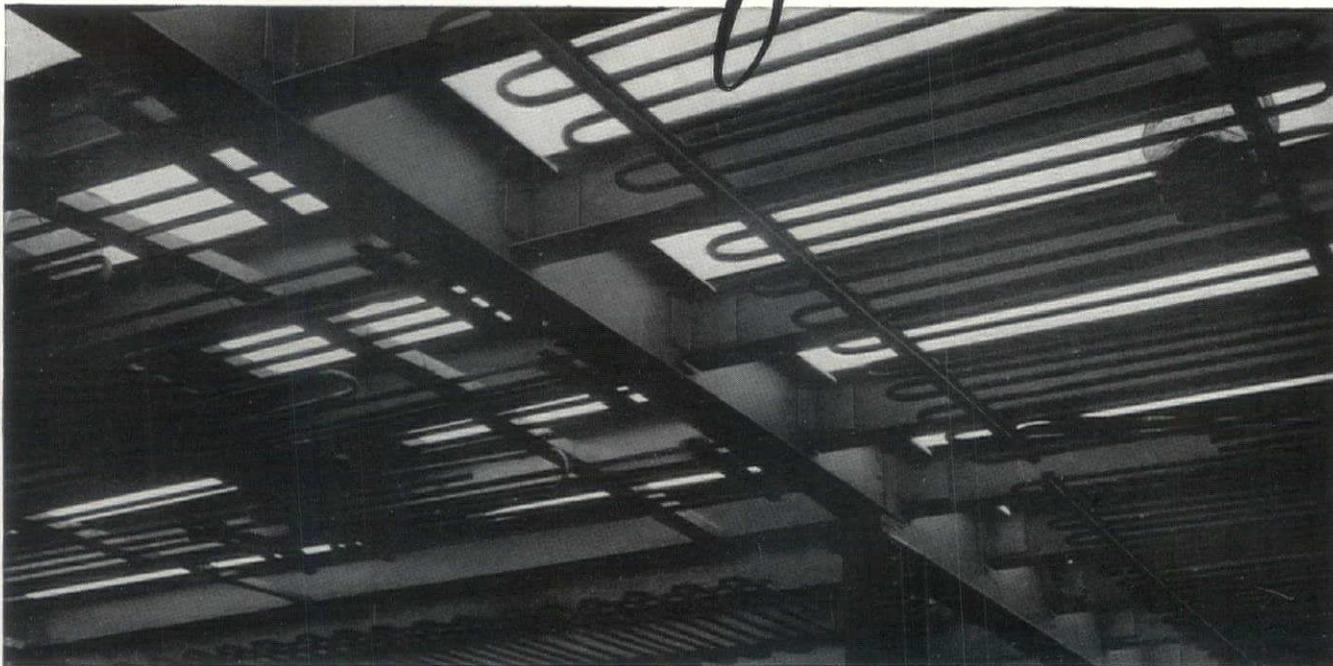
Three sources will provide the money with which to carry out the new housing program. First, the bill calls for an immediate appropriation of \$51,000,000, \$75,000,000 for the fiscal year ending June 30, 1938, and \$100,000,000 a year thereafter through 1940—a total of \$326,000,000. Still another \$100,000,000 will be borrowed from the Reconstruction Finance Corporation, and, finally, the new Housing Authority will be empowered to issue \$550,000,000 by or after June 1, 1939. The total of these sums is nearly a billion dollars.

It is assumed that if the program has proved a success by 1940 that further Congressional appropriations and further borrowings will be authorized.

Looking over the possibilities of the Wagner-Ellenbogen bill, it is immediately apparent that this measure, arrived at by concession, is only a partial answer to the housing problem. If as much as \$2,500,000,000 were spent or invested by the Housing Authority during the next ten years, the total sum would still be only five per cent of a moderate estimate of what is needed to re-house the lowest income groups during the next decade. There is still ample room for private benevolence, for

(Continued on page 6)

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PHOTO: ACME

The wreckage-strewn town of Cordele, Ga., is but one of many equally ruined towns left in the path of recent tornadoes. Nearly a third of the homes were demolished

limited dividend corporations, for profit-seeking builders to do as much as they want to in the housing field.

Certainly not to be called a "make-shift," the new housing bill, while it still leaves much to be desired, undoubtedly will provide a stimulus that will be a further boon to the construction industry and should erase at least some of the slum blights in American cities.

AFTERMATH OF ACTS OF GOD

• Just how devastating flood waters actually were is probably best shown by estimates of the costs of replacing demolished buildings and structures. "Business Week" estimates that losses were: Homes \$137,500,000; Stores \$37,500,000; Factories \$32,500,000; Public Works \$30,000,000; and Public Utilities \$12,500,000. A percentage breakdown indicates that losses in homes comprised 55 per cent of the total, stores 15 per cent, factories 15 per cent, public works 12 per cent, and public utilities 5 per cent.

Considering that still another \$25,000,000 worth of damage resulted from the tornado that hit Arkansas, Alabama, Florida, Georgia, Mississippi, North and South Carolina and Tennessee, it appears that industry will be hard-pressed to meet demands for construction materials. Certainly increased home building cannot help but result from this wholesale demolition by wind and water.

While accurate and complete reports from the South are still unavailable, industry already is working at near boom time levels to meet the demands of flood-

stricken states. The table below shows estimates of how reconstruction dollars will be allocated.

WHERE RECONSTRUCTION DOLLARS WILL GO

Estimates as of March 26 place the damage by states as follows:

Maine	\$32,000,000
New Hampshire	25,000,000
Vermont	5,000,000
Massachusetts	75,000,000
Rhode Island.....	10,000,000
Connecticut	40,000,000
New York.....	6,187,000
New Jersey.....	1,500,000
Maryland	10,000,000
District of Columbia.....	200,000
Pennsylvania	175,000,000
Ohio	15,500,000
West Virginia.....	15,000,000
Kentucky	1,250,000
Other states.....	10,000,000

Total\$421,637,000

"SALES MANAGEMENT"

VETERAN BUYERS

• How the veterans will spend their bonus money has become one of this season's most popular guessing games. In the last three months it has been conclusively proved an infinite number of times that Mr. Legionnaire will buy anything from rubber bands to lightning rods the minute he receives his check.

The latest report on the condition of the veterans' buying habits is offered by none other than the American Legion itself. Now, after having received 42,500 replies to questionnaires, the Le-

gion reports that the money will be spent in the following manner: (Note: The only drawback is that the Legionnaires expected to get cash, not baby bonds. Hence, one or two may change their minds.)

	Per cent
Paying debts.....	31.363
Building & Repairing Homes...	13.076
Buying Homes, House Lots & Farms	11.466
Furniture	5.862
Radios, Refrigerators & Furnaces	1.963
Men's Clothing.....	2.592
Women's & Children's Clothing	4.442
Cars, Trucks & Accessories....	6.467
Farm Implements.....	2.204

BOOMING BUILDING

• There has been so much loose talk about a building boom that the Northwestern National Life Insurance Company decided to find out for itself just how much optimism is justified. Taking sales of residential building lots as their criterion, they made surveys in 68 cities. Their conclusion: "The predicted building boom is actually here."

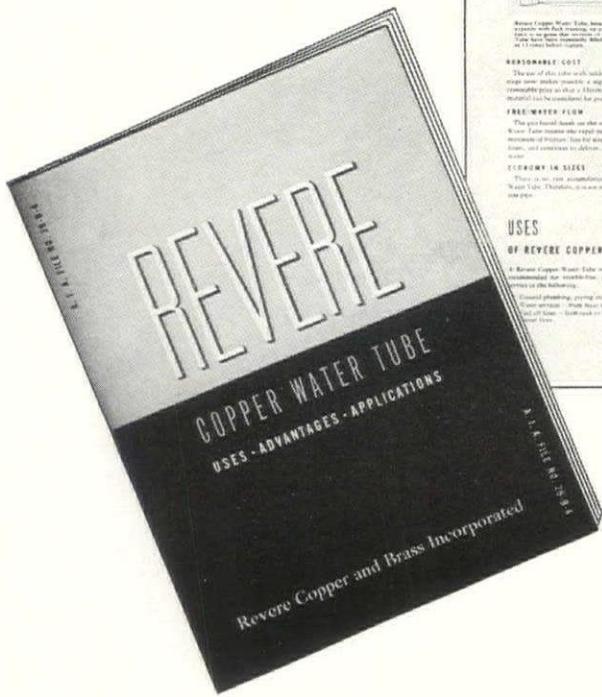
Of the 68 cities reporting, 50 showed definite increases in the sale of residential lots for the first quarter of this year. The least improvement was found in New England and the East, although Boston, Brooklyn, and Philadelphia reported considerable suburban activity, and Washington stated that speculative builders were keeping brokers busy locating residential sites.

Every one of the 20 southern cities reporting showed marked increases in residential lot sales, but, surprisingly, most sales are being made to individual purchasers who expect to build their own homes.

In the middle western states, contractors are beginning to buy lots in blocks in Minneapolis, Saint Paul, and in Grand Rapids, while sharp increases in sales of home sites were reported in Chicago suburbs, and in Cincinnati, Toledo, Dayton, Detroit, and Madison.

Of 20 western and southwestern cities, 16 report heavy increases in sales of lots, with special activity in Oklahoma City, Tulsa, Dallas, Houston, Fort Worth, San Francisco, Beverly Hills, Spokane, and Seattle.

Office buildings, currently quoted at \$466, gained 0.4 per cent for March after a February increase of 5.7 per cent. Other gains were housekeeping apartments, 0.8, and hotels 0.6 per cent. Apartment hotels lost 0.9 per cent.



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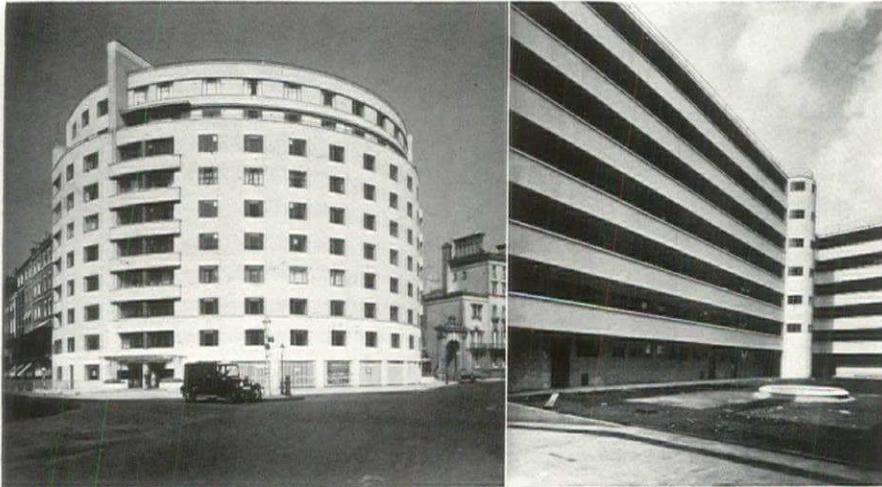


PHOTO: WIDE WORLD

The pattern of London's new residential buildings is part of an immense housing plan developed by the London City Council. In the last ten years, 10,000 apartments have been completed

CONSTRUCTION LEAGUE AND PWA

• President Roosevelt has repeatedly avoided any discussion of PWA's future. Neither his budget message nor his March message to Congress mentioned further funds for public works. Consequently, the Construction League last month reasoned that "prospects for additional funds for PWA are very dubious unless it can be demonstrated to the public and to Congress that there is a real need for work of this sort."

Anxious to prolong PWA's stimulating effect on construction, the League immediately took steps to support a newly formed bloc in the House of Representatives asking for \$700,000,000 for PWA. Led by Representative Beiter, New York Democrat, this bloc feels strongly that either a special appropriation should be made to continue PWA, or else \$700,000,000 of the \$1,500,000,000 relief fund should be earmarked for public works. Since these views coincide almost precisely with those of the League, the Policy Committee of the League, meeting in New York, laid down a four point program defining its attitude on work-relief and public construction programs. It reads:

"1. Any relief or work-relief program to be carried on by the federal government should be confined to activities and projects of a type that will not encroach on the field of public construction normally carried on under private enterprise and employment;

"2. To the largest possible degree, all federal construction projects of substantial and permanent value, especially those which require skilled direction or labor, should be administered by the appropriate governmental bureaus and departments normally responsible for such

activities, and should be carried on in accordance with normal construction procedure;

"3. The extension of federal aid to non-federal public works such as has been carried on by the Public Works Administration has been of substantial value in maintaining employment in the professions and industries dependent on construction; it should not be suddenly curtailed at this time when the construction industry, its organizations and its employes, are so dependent upon such work for a considerable part of present employment. The discontinuance of such federal aid to the construction activities by cities, towns and other political subdivisions should be gradual, thereby providing for a transition from the emergency conditions of the last few years to more normal conditions.

"4. In support of the foregoing policies the Construction League of the United States endorses the principles presented to the Senate on March 10, 1936 by Senator Hayden of Arizona and embodied in Joint Resolution HJ 492 introduced into the House of Representatives by Representative Beiter." (Both bills supported continuance of PWA—Representative Beiter's asking for \$700,000,000.)

To give this definition of purpose added weight, the Policy Committee also appointed a special committee, composed of some of the League's most illustrious figures, to see to it that the League's needs get proper attention. Headed by Colonel J. P. Hogan, Past General Chairman of the Construction League, the committee includes: C. S. Proctor, New York Engineer; F. P. Byington, Vice President of Johns-Manville; F. E. Feiker, Executive Secretary American Engineering Council; E. J.

Harding, Managing Director Associated General Contractors of America; Stephen F. Voorhees, President American Institute of Architects; and J. H. Zink, Vice President Heating, Piping and Air Conditioning Contractors National Association.

PULCHRITUDE AND TALKING TOWERS

• Latest of the FHA sponsored National Home Shows "played" before 125,000 people during its one week engagement in Pittsburgh's Motor Square Garden last month. Like all of the rest of the Home Shows, Pittsburgh's featured FHA's "talking towers," an architect-designed model home, numerous manufacturers' exhibits. But unlike the other Shows, Pittsburgh's boasted an added attraction. And the special feature was Miss Henrietta ("Miss America") Leaver.

Starting her career in the public eye as "Miss McKeesport," Henrietta Leaver since that time has won about all of the "figure titles" known to man. She has been "Miss Pittsburgh," "Miss America"; she has been selected by Hollywood folk as the most perfect model of modern times. Consequently, it was not surprising to find that Miss Leaver's "act" drew its fair share of the Home Show crowds. And four times a day, as she stepped into and out of Standard Sanitary Manufacturing Company's new triangular bathtub, there was a crowd on hand to gawp at Miss Leaver's spotlessly white bathing suit.

To perform this simple chore, "Miss America," according to the Bulletin Index, received the very ample fee of \$500. When quizzed by a Bulletin Index reporter, said she: "I think it's silly." 125,000 visitors thought it was very nice indeed.

DIRT ON SPOTLESS GARDENS

• After their streets had been flooded for the fourth time, their rents increased from \$12-\$15 to \$20-\$25, residents of the Texas low-cost housing project, called Spotless Houston Gardens, last month decided to do something about their plight. And what they did first was to draw up a list of charges to be presented to housing authorities. They charge:

"1. That the government built their dwellings with green lumber which has seasoned and caused cracks in the walls and floors;

"2. That builders were skimpy with shingles and resultant leaks have ruined the wallpaper;

"3. That by neglect or oversight no

(Continued on page 11)

HERSHEY CHOOSES LINOTILE

Linotile floors brighten Visitors' Room of Hershey Chocolate Corp., Hershey, Pa. Colors are Oyster, Travertine, and Light and Dark Walnut, in 30" x 36" tiles. Walls and pilasters are Armstrong's Pine and Walnut Linowall. Sound-absorbing ceiling is Armstrong's Corkoustic. More than 32,000 sq. ft. of Linotile; 45,000 sq. ft. of Corkoustic; and over 1,000 sq. yds. of Linowall were used in this building.



Linotile floors like this

HELP YOUR CLIENTS RENT AND SELL

YOUR clients will find it easier to rent and sell when their stores and offices have the eye-appeal that richly colored, handlaid floors of Armstrong's Linotile bring to this room in the Hershey Chocolate Corporation's new windowless office building.

Linotile is an exceptionally durable resilient tile. Inexpensive to install and easy to maintain by occasional washing and waxing, it never requires costly refinishing. Colors run through the full thickness of

each tile, so that scuffing feet and scraping furniture cannot wear away their freshness and beauty.

When you remodel or build, Armstrong's Architectural Service Bureau can give you unbiased, money-saving suggestions because Armstrong offers the only complete line of resilient floors: Linotile, Accotile, Cork Tile, Rubber Tile, and Linoleum. Write now for "Individuality in Handlaid Floors." Armstrong Cork Products Co., 1301 State St., Lancaster, Pa.



ARMSTRONG'S *Linoleum* and RESILIENT TILE FLOORS

LINOTILE • ACCOTILE • CORK TILE • RUBBER TILE • LINOWALL • ACOUSTICAL CEILINGS

DISSATISFIED CLIENT!

Discontent caused by a system that doesn't keep water always ready, always hot, always plentiful—runs from inconvenienced babes to irritated bill-payers.

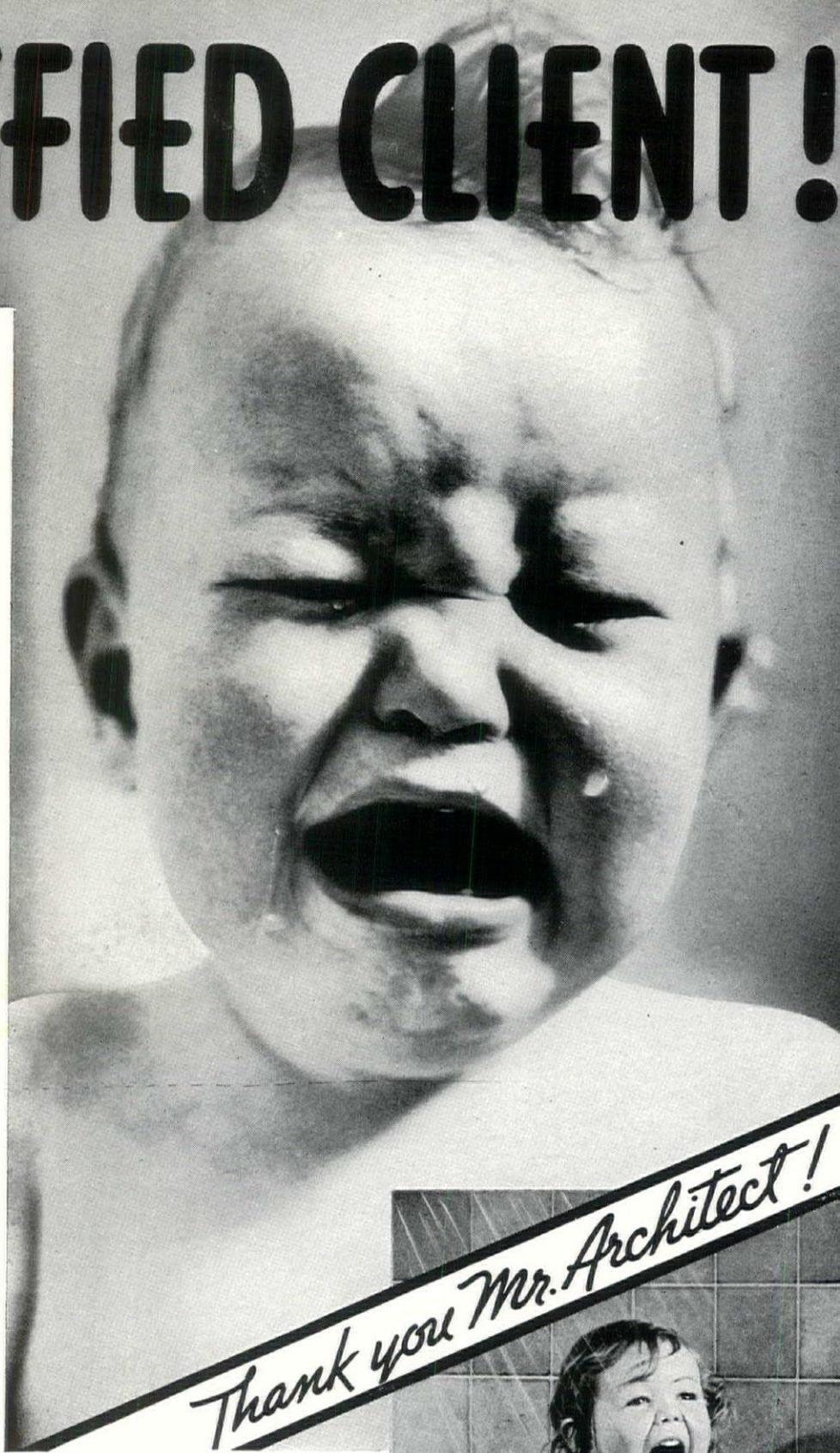
Today, the modern, automatic gas water heater offers architects the most practical type of system from the standpoints of both service and economy.

Continuous, trouble-free operation is completely assured. The owner never has to look at the heater—never has to wait for hot water. Automatic gas-fired heaters deliver hot water day and night—and they deliver it at low cost.

New advancements in construction, insulation, thermostatic control and burners have greatly improved heat utilization, raised efficiency, lowered operating costs and modernized appearance.

Secure the comparative costs of operating various types of water heating systems by writing this Association. The figures are from tests by unbiased authorities. They can be applied to local rates for all types of fuels.

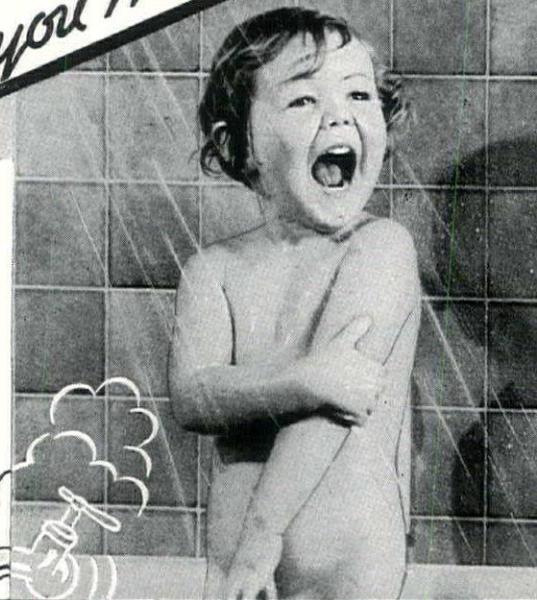
They definitely prove that automatic gas water heaters are the most practical heaters to recommend. Write them into your specifications.



Thank you Mr. Architect!

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CLEVELAND HEATER COMPANY	LOVEKIN WATER HEATER COMPANY
CRANE CO., PREMIER HEATER DIVISION	J. W. MOORE VALVE CORPORATION
EVERHOT HEATER COMPANY	THE PITTSBURG WATER HEATER CORPORATION
GAS AND ELECTRIC HEATER COMPANY	RUUD MANUFACTURING COMPANY
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HOFFMAN GAS & ELECTRIC HEATER COMPANY	UNITED AMERICAN BOSCH CORPORATION
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ASSOCIATION of GAS APPLIANCE and EQUIPMENT MANUFACTURERS

GAS WATER HEATER DIVISION, 60 East 42nd Street, New York

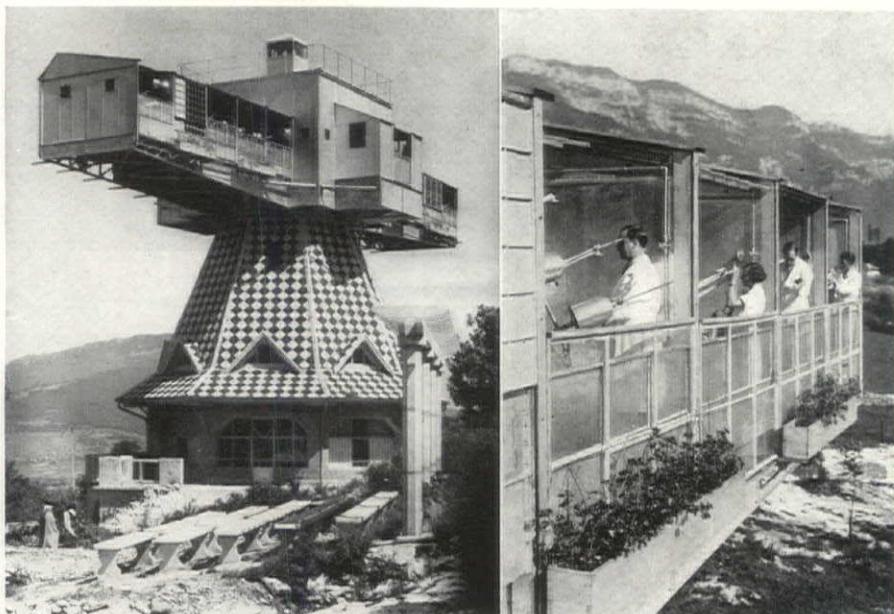


PHOTO: EUROPEAN

Following the sun in Aix-les-Bains. A new solarium which revolves, so that the patients being treated for rheumatism and other ailments may have the full benefit of sunlight

(Continued from page 8)

drainage system was installed and the streets have been flooded four times in one year;

"4. That electric rates are twice those in nearby Houston;

"5. That the government countenanced shoddy workmanship in the low-cost housing, leaving rough edges that take the joy out of living."

When the Spotless Gardens' homesteaders bought their homes they signed contracts to pay \$12, \$14, or \$15 per month—a thirty-year, nothing-down proposition. Consequently, while rents remained at this low figure tenants passed over the flaws in their homes with a what-do-you-expect-for-nothing attitude. But when monthly payments were increased to \$21-\$25, when maintenance and repair bills jumped from \$1 to \$5 monthly, then residents entered their complaints. And they were none the less furious because the government had given them an extra 10 years to pay off the mortgages. Unconfirmed reports in Houston said that the Department of Justice would investigate the situation.

Spotless Houston Gardens, completed February 12, 1935, is one of the Department of the Interior's projects for relieving urban congestion by providing homesteads for families with incomes of \$100 a month or less. It is composed of 80 four-room houses and 20 five-room houses on a 320 acre plot. Each house, situated on a two to three and a half acre tract, has its own sustaining garden site.

83 PER CENT CONSTRUCTION GAIN

• First quarter reports on the condition of American business show definitely that nearly every branch of industry has cause for optimism. For, with the construction industry leading the procession, everything from motor car production to rural retail sales and freight car awards is boasting an increase.

According to the F. W. Dodge returns for the 37 eastern states, construction awards for the first three months totaled more than a half-billion dollars for the first time since the comparable quarter of 1931—representing a gain of 83 per cent above a year ago.

Large as this volume is, however, it was considered only an average month's business in the period 1925-28.

Further, while residential contracts for March were the highest for any month since October 1931, the volume still was less than one-fifth its normal size in the palmy 1925-28 days.

Residential total for the first quarter was \$123,885,600—75 per cent ahead of the same period in 1935.

Even greater gains were registered in non-residential building, with construction contracts in the first three months this year totaling \$234,551,000—a 118 per cent gain over 1935. Public works and utilities awards of \$187,434,700 were 60 per cent ahead.

By comparing the gain in construction awards with gains registered by other industries, it becomes even more apparent that building volume is ad-

vancing at a more than proportionate pace. Even with increased buying by railroads, household appliance companies, and automobile manufacturers, the steel industry continues to work at only 68 per cent of its capacity. Motor car production is only one per cent ahead of last year; department stores report a mere 9 per cent increase. All in all the 83 per cent gain recorded by construction stacks up very favorably with the other industries.

HOLC INTEREST

• There are few banks that wouldn't like to trade places with the Home Owners' Loan Corporation, for right now the Treasurer's office is receiving more than \$600,000 every business day in payment of loans made for the relief of home mortgage distress during the past two and a half years. On February 29 total payments of interest and principal amounted to \$246,735,297—approximately 73.4 per cent of the \$335,669,010 due the Corporation up to that date.

On the other hand, by February 29 HOLC had been obliged to institute foreclosure proceedings against 4,162 of its borrowers who refused to make payments although demonstrably able. These deliberately delinquent borrowers represent 55 per cent of the 7,295 total foreclosure proceedings started by the Corporation. Since 998,850 loans have now been granted, the 7,295 foreclosures make an average of only one in 140.

RIISING REAL ESTATE BONDS

• Further evidence that recovery in building is no mere flash in the pan can be seen in the current action of real estate bond prices. Statistics compiled by Amott, Baker and Company show that the steady upward climb in real estate bonds which started in 1933 is continuing. The average gain for March, based on the market action of 200 typical eastern issues, was 1.2 per cent.

Average prices, which were at \$218 per \$1,000 face value at the end of 1933, reached the high of \$408 for March. The gain for the month compared favorably with the rise for the month of February of 0.8 per cent and raised the total gain for the first quarter to 4.9 per cent.

Theatre issues, after a February decrease of 6.1 per cent, resumed their commanding position in the real estate bond market by gaining 14.4 per cent in March. These issues, with an average bid of \$619, are again the price leaders.



PHOTO: WIDE WORLD

A group at luncheon, after inspecting the site for New York's 1939 World's Fair, included, from left to right: Mayor LaGuardia, Senator John Dunnigan, Park Commissioner Robert Moses, Senator Jeremiah Toomey and Senator Joseph Baldwin. Grover A. Whalen, new President of the World's Fair Corporation, is in the background, facing the camera, between Mayor LaGuardia and Senator Dunnigan

"AS QUODDY GOES—"

• "As Maine Goes So Goes The Country" is just about the first maxim in the politician's notebook. And if there is any truth in it, President Roosevelt last month set up an obstacle in his path to re-election. For the President, in denying additional funds for completion of the Passamaquoddy project in Eastport, Maine, certainly gained nothing in the admiration of that State's voters who worked on "Quoddy."

It was last summer on July 4th, when the "Down Easters'" American pride naturally was at its height, that Vice President Garner punched a telegraph button in Washington that sent Maine soil spurting into the sky. Army engineers immediately took charge of the \$36,000,000 tidal power development—known in local parlance as "Quoddy's mite." Workers were dispatched to Eastport during the summer and fall until 5,400 had been employed. They built a model village, complete in housing, sanitation and electrical power to accommodate 1,500 white-collar workers.

Then Maine's heavy winter forced cutting of the staff to its present level of 2,600. Workers moved into their homes and started warehouses, shops, docks, loading facilities, and actually began three rock-fill dams. But with the coming of spring the first doubts about further appropriations began to

be heard. Of the original \$10,000,000 grant, \$3,000,000 already had been withdrawn. And of this remaining \$7,000,000 only \$900,000 is now left, with a strong possibility that this also will be taken back for flood rehabilitation programs.

Residents of Eastport, whose sole livelihood has come from a steadily decreasing fishing business, plan to use all available means to secure continuation of the project. But looking at the possibilities, there seems little reason to believe that Passamaquoddy will be continued after July 1st. Even Representative Brewster, Maine's strongest supporter of the project on Capitol Hill, admits that since the House Appropriations sub-committee omitted it from the Army Supply Bill in February, chances are slim.

Meanwhile, however, Quoddy's proponents are organizing one last appeal to the President. And their first question undoubtedly will be: "What do you plan to do with the housing development already completed?"

PUBLICITY AND FACTS

• So much publicity has been given government-sponsored construction projects that almost everyone has come to believe that virtually no building except that under Federal auspices is being done. To correct this fallacy, and

to show-up this out-of-focus viewpoint, the April "News and Opinion," bulletin of the Building Trades Employers' Association, examined New York City's 1935 building totals. Federal work, the bulletin reports, accounted for only three per cent of the total.

By using the official borough figures of the United States Department of Labor, and by adding the Federal awards for Federal projects, the sum total of \$153,765,000 was reached—of which \$4,446,000 was straight Federal work.

Aside from this comparison, however, numerous other interesting facts came to light. It can be noted that 16,892 families were provided for during the last year at an average cost of \$3,500 per family. Of this number about 4,000 families occupied one or two-family houses.

The average cost of one-family houses in New York City was \$3,900, two-family houses \$6,500, and multi-family houses \$171,000. Residential alterations for the city averaged \$1,200 each. (It should be remembered that costs are estimated, turned in at the time building plans are filed and will probably increase from 10 to 20 per cent.)

FAIR AND WARMER

• New York's springlike weather revived considerable activity and interest in the 1939 Fair, proposed for Flushing Meadows Park. Most of the money which the State and City are to put up for the Fair has been voted, and a drive is now on for funds from private and business sources. New York's Board of Estimate, in one day, passed measures, after a minimum of discussion, appropriating \$308,020 to start actual work of preparing the site. The Board of Estimate also approved the form of contracts, authorized plans and specifications for converting the swampy land into a park, and agreed to the acquisition by condemnation of 372 additional acres of land. George McAneny, who previously had been President of the World's Fair Corporation, became Chairman of the Board, and Grover A. Whalen became President of the corporation.

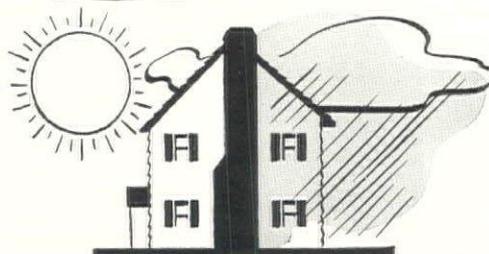
After considerable fireworks about the possible architectural treatment of the Fair, Mr. Whalen disclosed that no architectural treatment had been decided upon and would not be until the Committee, headed by Percy S. Straus, President of R. H. Macy & Co., Inc., makes its report. According to Mr. Whalen, "Criticism of any so-called plans will be as nebulous as the plans themselves."



*What paint will best protect
this **HOME-TO-BE?***

National Survey* shows that 68% of leading architects specify PURE WHITE LEAD in Oil for exterior painting

**Impartial survey made by Forest Products "Better Paint Committee"*



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New, experimental paints have flooded the market during the past few years. But Pure White Lead in Oil is still first choice of architects. Eagle Pure White Lead has proved over 90 years that it gives maximum protection against paint failures — cracking, scaling, excessive chalking.



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There's no argument with building contractors when the paint you specify is Eagle Pure White Lead in Oil. Contractors know from long experience that white lead gives a longer-wearing, more satisfactory job. It's the paint they prefer to use.

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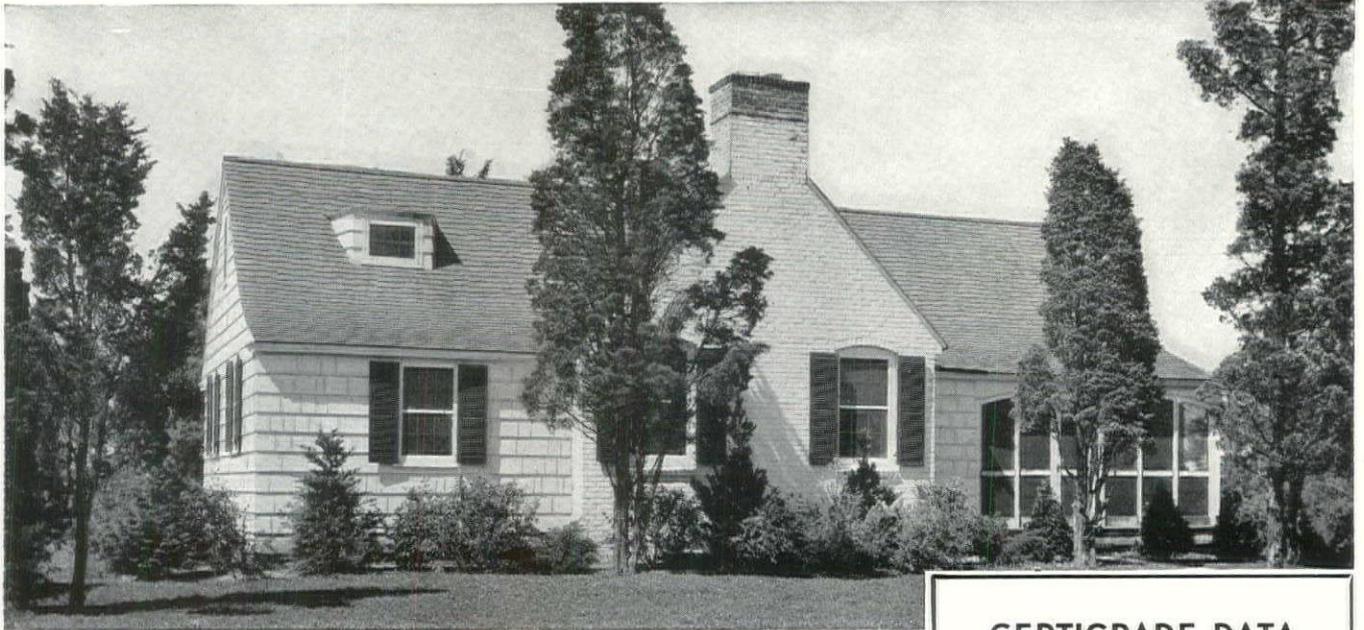


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LONG ISLAND *casts its vote* for CERTIGRADE EXTERIORS!



This home, at Harbour Green, Long Island, one of a number utilizing Red Cedar Shingle exteriors, was designed by Randolph Evans, architect, and built by Harry L. Bertell, for the Harmon National Real Estate Corporation of New York. Architects are invited to submit reproductions of their work to the Bureau.

Architect Randolph Evans achieved beauty and low-cost insulation for his client by specifying long-life Red Cedar Shingles for both roof and side walls of this lovely home.

ARCHITECTS all over the United States are finding new possibilities daily for distinctive treatment of roofs and side walls with CERTIGRADE Red Cedar Shingles. Their beauty, utility, long life and moderate cost answer present-day demands in home construction. Women

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are proud of the deep shadow lines and pleasing color tones of Certigrades which emphasize the warmth and charm of their homes. The random widths of these shingles eliminate the monotony of set, mechanical patterns.

On the practical side, your clients will find that the long life, low initial cost and high insulation value of Red Cedar Shingles mean real living comfort and long-time economy. To you as an architect these same factors mean that with Certigrades you are creating homes which will have the fullest measure of beauty, protection, durability and sound value.

LOOK FOR
THIS LABEL!



CERTIGRADE DATA for ARCHITECTS

LONG LIFE: The CERTIGRADE Red Cedar Shingle, when applied with proper nails, and when the valleys and flashings are right and in keeping with Bureau specifications, offers a roof life expectancy of thirty years or more for the 16-inch shingle, thirty-five years or more for the 18-inch shingle, and forty years or more for the 24-inch shingle.

THREE GRADES: CERTIGRADE shingles are packed in three grades, No. 1, No. 2 and No. 3. The No. 1 must be 100% edge-grain, 100% clear and 100% free from sapwood. Slight tolerances are allowed in No. 2 and No. 3. These last two grades are intended primarily for under-coursing and for roofs and side walls of buildings of cheaper construction.

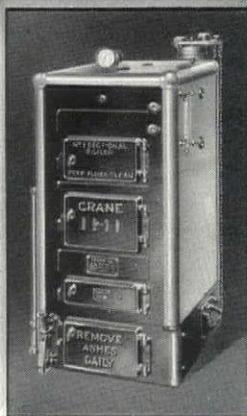
CHOICE OF LENGTH: Each grade of CERTIGRADE shingles—No. 1, No. 2 and No. 3—is manufactured in three lengths—16-inch, 18-inch and 24-inch. This range in length, together with the random widths, gives architects opportunity for a wide variation in effects. There is never anything monotonous about a roof or side wall of Red Cedar Shingles.

REMODELING: In remodeling old homes a new roof and side walls of Red Cedar Shingles will work wonders. They can be put on directly over the old covering—no mess or expense of removing the original material, and the home will have the added insulation value of the double covering.

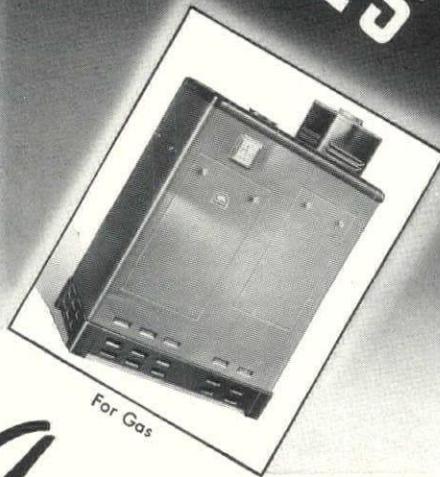
HEAT FOR TODAY'S HOMES



For Oil



For Coal



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With a Difference

● There is in every Crane boiler and radiator a factor of design which makes for absolute and appreciable economy in its operation. Every Crane Heating System has this *difference*.

Whatever your client's desires in the way of heating, you can satisfy them with a Crane Heating System, and because these systems save fuel, require minimum attention, and cost no more, you are doing the right thing in recommending them.

The Crane D 1 Oil Burning Boiler is unmatched in efficiency. For gas-firing, there is the auto-

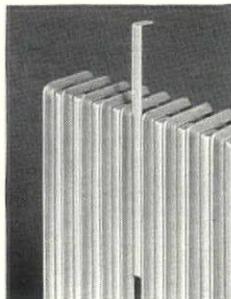
matic Basmor, also a fuel saver. For coal—either stoker or hand-fired—Crane Boilers require a minimum of attention, operate long and dependably. All may be had in two-tone green

jackets which present a handsome appearance.

Crane Directed Radiation—unique in its heating characteristics—and Crane Humidifying Radiators give effective warmth, healthful atmosphere.

Just as Crane pioneered beauty and efficiency in bathroom and kitchen, it provides the utmost in dependable heating for the homes of today.

Crane Humidifying Radiator—takes small space, has large evaporating capacity, negligible operating cost. Replaces any radiator in hall, living room, dining room or other location.



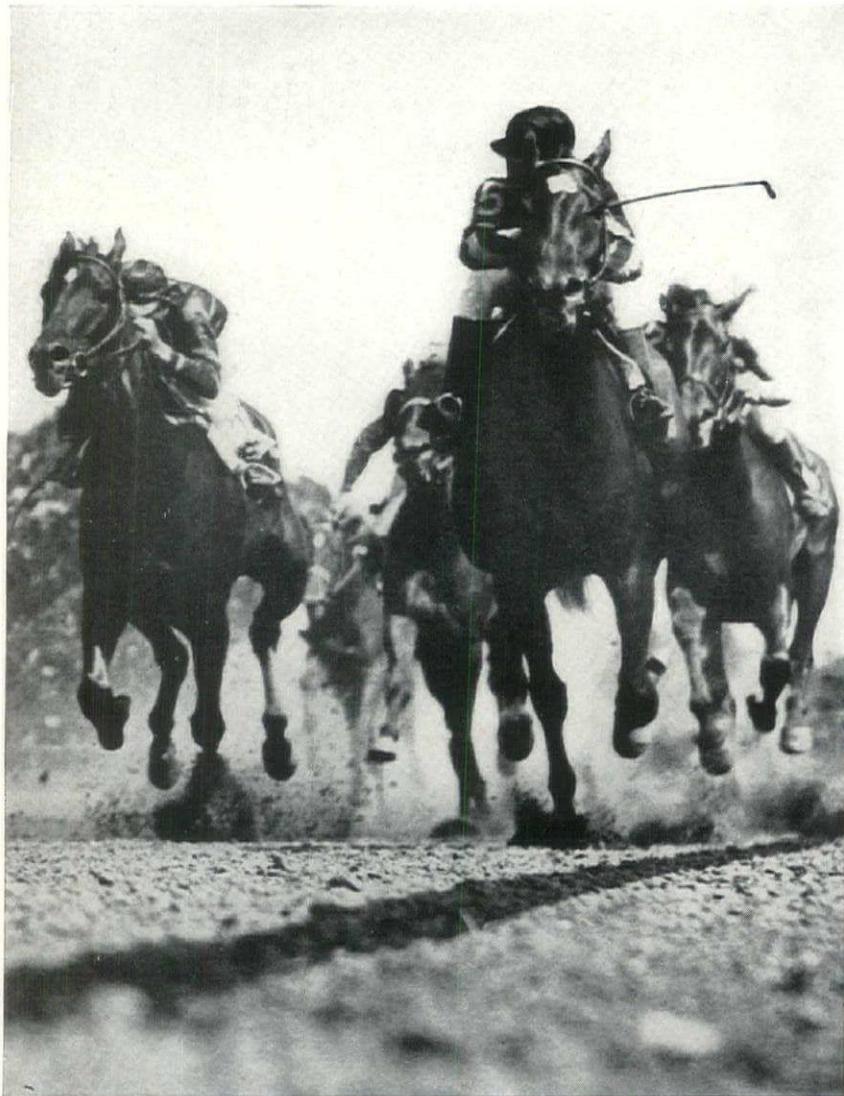
Crane Directed Radiation—directs heat outward into room, cuts ceiling-to-floor temperature difference, protects walls and drapes. View of back, one shield raised.

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'INCOR' PAID 3 TO 1 AT SUFFOLK DOWNS

Forty thousand people saw the first race at Suffolk Downs, East Boston, last July 10. Ten weeks before, the track site had been a barren waste, a public dump. Once again the 'impossible' was accomplished. To illustrate: Work on 'the world's largest race-track grandstand'—8,000 cu. yds. of concrete—started May 24, was completed June 21. With ordinary cement, forms would have remained in place six days, requiring purchase of lumber for the entire job. By using 'Incor' 24-Hour Cement, forms were stripped in two days, re-used again and again. That meant 62½% fewer forms. Result, a \$10,000 saving—more than three times 'Incor's' added cost.

'Incor'* is a better Portland cement—it attains service strength in one-fifth the usual time. But it goes much deeper than mere time-saving—for 'Incor' saves money, by eliminating dead-time waiting for ordinary concrete to harden. This basic principle applies wherever concrete is used—suggesting that contractors be encouraged to estimate under form-removal specifications which take full advantage of 'Incor's' earlier service strength. Made and sold by producers of Lone Star Cement, subsidiaries of International Cement Corporation, New York; also sold by other cement manufacturers. *Reg. U. S. Pat. Off.

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with no storage tank

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It fits beautifully in any scheme of basement design or decoration, and marks any home it serves as *modern* to the final degree.

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BRANCHES AND REPRESENTATIVES IN PRINCIPAL CITIES



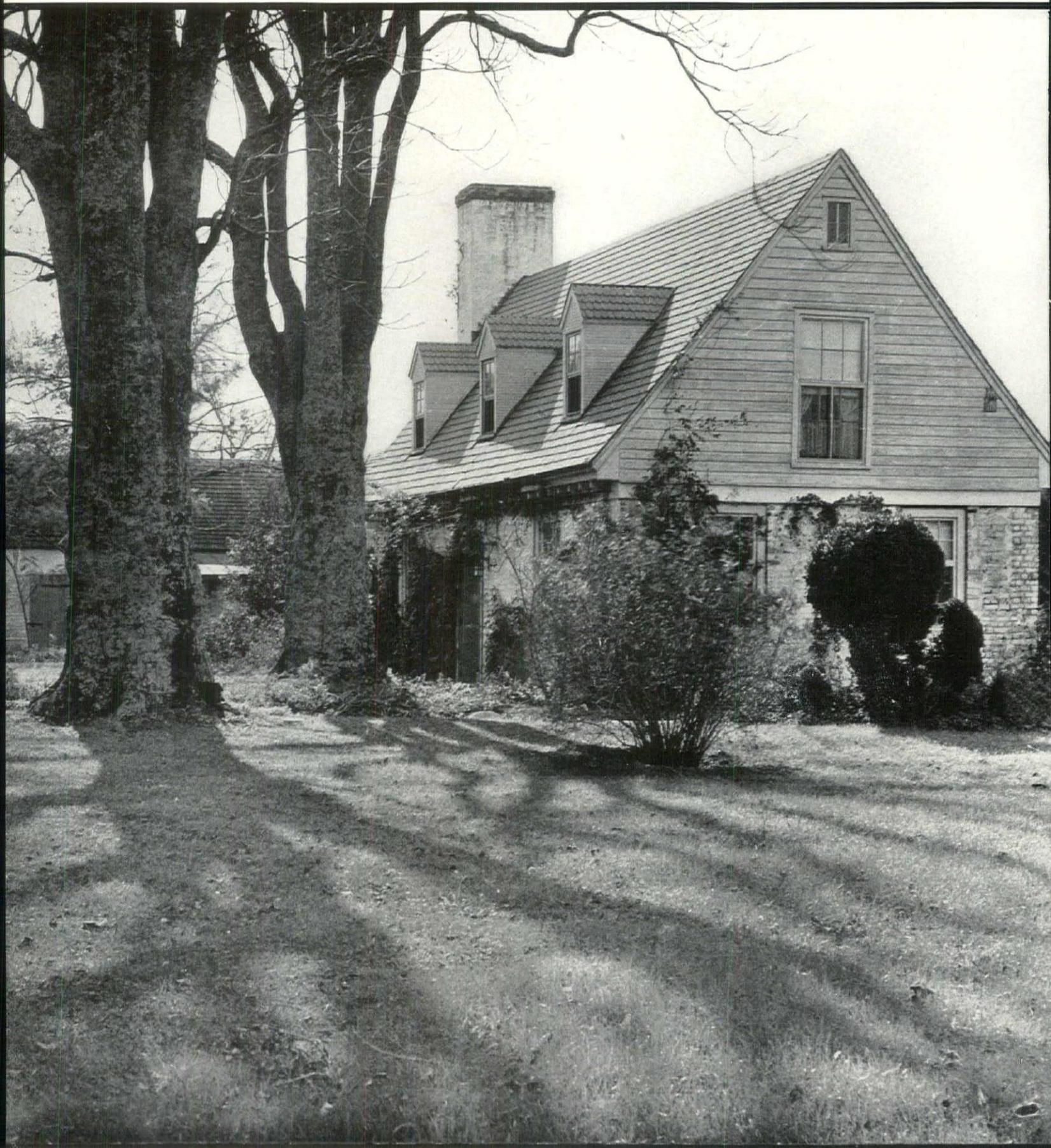


PHOTO: EDWARD PIERPONT BECKWITH

One of the dependencies at Claremont in Surry County, Virginia, restored by William Lawrence Bottomley, Architect

THE BETTER HOUSE WILL BE,—

DESIGNED by Architects

Who attack the problems with a clear understanding of the particular living requirements of the individual family, knowing the needs, activities, possessions and desires of every occupant of the house:

Who plan first to satisfy these requirements in an organic, efficient manner, within the limitations of the budget established by the owner's capital and income:

Who plan the house and its surrounding land for use and enjoyment out-of-doors as well as in, for recreation, relaxation and repose; and in comity with its neighbors and the community:

Who have the imagination to foresee the use of every space and so to arrange areas that their use will be both efficient and pleasurable, will save effort and time, and will provide comfort, convenience and the sense of well being:

Who are sensible to the inherent esthetic qualities of materials, the beauty of plane surfaces, the effects of color and texture:

Who are aware of the necessity for pleasing proportions, the lasting satisfaction of simplicity, the importance of human scale in this most personal of buildings:

Who feel, as well as think and know.

BUILT of Quality Materials

Which are carefully selected for their fitness for the particular function which they must perform, and therefore,—

Which have been tested by a yet-to-be-established scientific and impartial research bureau, to determine their characteristics and fitness for various uses, through field experience as well as laboratory tests:

Which have been analyzed also to determine their relative costs,—first cost as installed in the house (including both the material and labor costs) and, more important, their *cost to use* which involves the capital investment, duration of efficient service and costs of operation, maintenance and repair:

Which are chosen on the above basis irrespective of the fact that they may be the oldest used by man, or the newest evolved by man's ingenuity and the use of machines:

Which are produced by reliable manufacturers who will tell all the facts about their materials clearly, concisely, honestly and who will guarantee their materials to be as thus stated.

EQUIPPED with Improved Devices and Machinery,

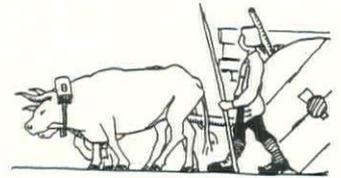
Which lighten the household tasks, save human energy and time, releasing them for leisure and development:

Which render services commensurate with their cost to use:

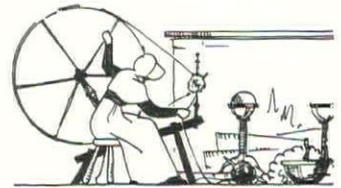
Which provide for maximum bodily comfort and health through sanitation, air and temperature conditions, light and communication.

BUT THINKING MAKES IT SO

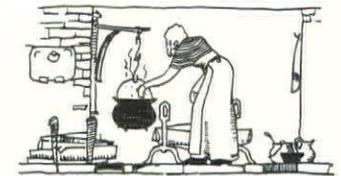
Is the small house still in the ox-cart stage? Straight thinking means straight planning and a better architecture evolves. The seven attitudes influencing this progress



TODAY we find numberless critics, both professional and lay, who take an unseemly joy in ridiculing the small house architecture of the past, or who get great satisfaction in praising (or condemning) the various modes of the present. Perhaps Hamlet has provided the reason for this state of things: "There is nothing either good or bad, but thinking makes it so." Thinking, taste and fashion change, and the temper of the day is a determining factor in deciding whether the thing is good or bad. The fads and fancies of one period may be good for that time, but are detested or derided by the next generation, and then may be appreciated, resurrected and imitated by the third.



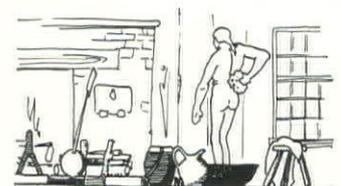
¶ Good, bad or better, is largely a matter of time and emphasis,—of where the emphasis is placed by the particular civilization, or location, or generation. So the manifestoes, credos and proclamations of the protagonists of the various cults can be seen in their true light by considering just where they put the major emphasis and on what attributes they place no value. Over-emphasis on one phase of architecture, and under-emphasis, neglect, or elimination of others may make houses either good or bad in the eyes of each particular beholder. The differences in judgment make life interesting, conversation animated and provide that necessary sense of superiority for the egos of us all. And few judgments are not influenced by the personal or pecuniary interests of the judge.



¶ Classified according to the emphasis placed on the various aspects of the small house, there are at least seven approaches, each of which carries its own standards of judgment. To get a clearer perspective, a more sharply focused picture of our own individual approach, it will be well to examine briefly the attitude assumed, consciously or unconsciously, by each of the seven classes. It will help us to see the small house WHOLE. We may even examine the validity of our own thinking about the small house, and perhaps find that some wholesome re-orientation will be necessary.

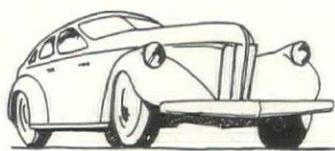


¶ Here, then, is a concise, suggestive (if somewhat staccato) summary of the seven approaches:



1. **The Emotional or Sentimental Approach.** Home, Sweet Home! Nostalgic longings for the good old days of our childhood; the heart-warming sense of security in the house which is a constant reminder of more pleasant times; associations through forms and possessions that take us back to our less troubled years; through them an escape from the realities and complexities of the present. The satisfaction in having tried the old and found it good. The personal pleasure in viewing the





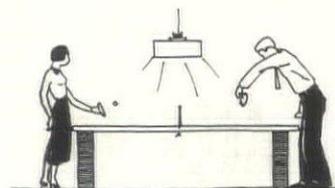
old familiar forms, their refinement in contour and scale, their appropriateness to their purposes, the richness of their background in the evolution of forms through past centuries. The emphasis on instinctive or unconsciously conditioned personal likes and dislikes.



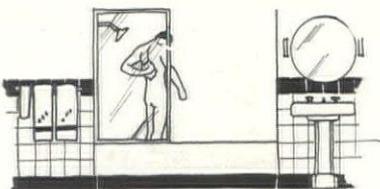
2. The Esthetic Approach. The house as an object of beauty; architecture as the greatest of the fine arts. The emphasis on visual appeal, conformity to academic rules or laws of composition, balance, rhythm and harmony. The house as an opportunity to display the creative imagination in the production of form for its own sake, or to evoke certain emotional reactions in the beholder, so that the house will be thought charming, lovely, picturesque, quaint, or perfectly period.



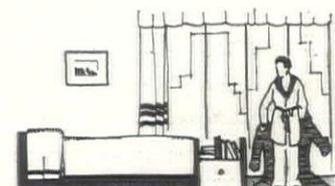
3. The Gregarious or "Social" Approach. Arising from the desire to conform to the taste or fashion of the social group to which one belongs, or to ape a more financially-successful group, which sets the pace and determines the standards. The dread of being considered a non-conformist, of being queer or radical; wanting to be like our neighbors, only more so; keeping up with the Joneses (the great stabilizers of mediocrity, old standbys of quantity merchandising). Emphasis on mass psychology.



4. The Financial or Commercial Approach. The house as a commodity to be produced cheaply for sale at a profit; an aggregation, if not an organization, of selling-points, sale-producing and colorful "features." The house as a financial investment for funds, safe, long-term, reliably interest-bearing; demanding high standards of construction and equipment to protect the mortgage. Emphasis on price and income possibilities, balancing appreciation in land value against depreciation and obsolescence of the structure. The production of houses as the principal source of livelihood for laborers, artisans, mechanics, contractors, architects, draftsmen, etc. The house as a creator of sales opportunities for numberless retailers, jobbers and manufacturers of the materials and equipment of the house itself, its furnishings, and the supplies necessary for its operation, maintenance and repair.



5. The Political Approach. The house as the stabilizer of population or an augmentor of population. A source of civic pride, and of municipal revenue through taxes. Home ownership as a deterrent to migration or to political unrest; an antidote to radical propaganda. The house as producer of a stable, contented or tractable population available for the industry and commerce of the city or town.

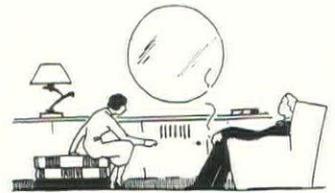


6. The Engineering or Functional Approach. The house as the enclosure of space for particular functions, organized and arranged for efficiency and economy. Emphasis on the material and structural elements, on making the house work as a machine works; "the house a machine to live in." Reason or intellect as the guiding principle, no emphasis on the spiritual or emotional; elimination of all traditional elements found to be not essential to the physical functioning of the house. "That which is most efficient for its use is, ipso facto, most beautiful," a rational rather than an emotional esthetic.

7. **The Comprehensive or Architectural Approach.** Predicated on the understanding that the functions of the house are a complexity of physical, psychological, economic, social, emotional, financial, and political services. The house to serve the needs of living to the full, providing the utmost in comfort, conveniences, and amenities within the limits of the economic budget of the owner. As Walter Gropius put it, "—the complete satisfaction of every material and psychic requirement . . . the maximum effect with the least possible means." An attempt to analyze and synthesize, to arrive at an all-inclusive judgment, to avoid undue emphasis on any one aspect.



¶ The outline above has indicated, either by reference or implication, the scope of the myriad considerations which must guide the way to the better house. And these considerations indicate some diametrically opposed points of view, some mutually exclusive desires, some necessary decisions regarding comparative values for particular cases, and not a few compromises—for the small house and its development are influenced by conflicting factions. Even the single house for the individual owner must be a compromise between what he would like to have and what he can afford. His better house may not cost less than the usual, but it will give more for the same money, more in convenience and comfort, in steps and labor saved, in increased leisure and freedom from household chores.



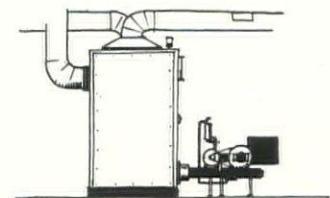
¶ The better house will be the product of today's architectural thinking. It will be based on a complete analysis of the real needs and desires of modern living, plus the continuing study of better ways and means of satisfying them. There will naturally be a searching examination of the successes and failures of the past to determine the why and wherefore. Not all the efforts of the past have been in vain, nor is this problem of providing comfortable, convenient and satisfying shelter altogether new, as one might gather from disdainful critics.



¶ The rapid advances in developing mechanical and electrical adjuncts to easier and more convenient living have been largely the result of the thinking of inventors, engineers and manufacturers. The architect's problem has been to incorporate and co-ordinate these new products in the house and still to keep the costs within the owner's budget. The present emphasis, especially among the younger architects, is decidedly on the material and physical aspects of shelter. The desire to take advantage of all the new devices which make life easier and more comfortable results in an increased complexity and a correspondingly increased cost—both first cost of the house and operation and maintenance costs. As an aid to merchandising, esthetics is introduced in the form of "styling" of individual products often with little regard for one another. However, there is a certain homogeneity in the modernistic "streamlining" now the vogue. It is easy for the architect and his client to become so intrigued with the many details and fascinating gadgets that they fail to see the small house whole.



¶ Both the designer and the owner must realize that the better house will only be possible when there is a conscientious effort to consider all the aspects of the home and the "comprehensive approach" is adopted.



Modern living involves the use of mechanical and electrical aids like these, undreamed of a century ago. . . . The better house must take them all into account in its plan

SUNLIGHT IN PLANNING

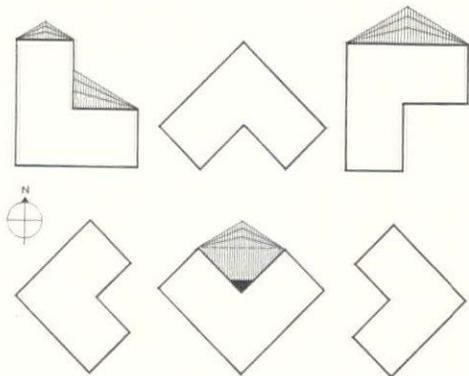
BY DEAN AXLINE

DURING the year in many of the most densely populated sections of the United States little more than fifty per cent of the total possible sunlight penetrates to the earth. This is caused by a film of fog, clouds, and dirt-laden air. Therefore it is highly important that houses in these areas be planned to take full advantage of what sunlight there is.

Three things are to be considered in locating the house advantageously for sunlight: 1. The penetration of sunlight through windows, determined by the exposure to the sun (insolation) and the angle of the sun's rays. 2. The desirability of maximum sunlight infiltration in winter, and the undesirable heat of excessive sunlight in summer. 3. The shapes and relationship of the masses of the houses to each other and to the direction of the sun's rays during the year.

Important rooms should admit adequate sunlight, particularly in the winter months. Shallow walls, high window heads, and the location of the windows with proper exposure aid this infiltration. South and Southwest are best exposures in winter, East and South are best in summer as western exposures are hot. Sunlight can be controlled by awnings, shades, venetian blinds, or by permanent visors or overhanging projections.

The unshaded areas, in the illustration, show the relative amount of sunlight that is admitted by windows facing in different directions. There is no attempt to trace the actual sunlight pattern; the infiltration is based on an entire day, and the windows are assumed to extend from floor to ceiling unobstructed. The latitude is 41 degrees, approximately on a line through Boston and Chicago, (see plans at the right).



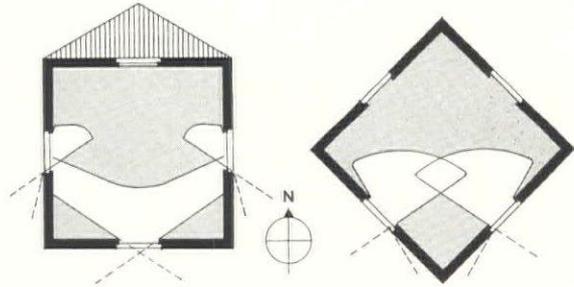
THE L-SHAPED MASS

The hatching indicates the areas of complete shadow—areas which receive no sunlight at any period of the day. Except for the plan with the re-entrant angle to the North, the area of complete shadow begins with the equinox and attains its maximum size on December 21st. Note that it has an area of complete shadow which does not disappear even in the summer solstice (shown in solid black). The dotted line through the hatching shows the area without sunlight at the equinoctial periods when the sun follows an East and West path; the solid black lines show the complete shadow area for the winter months. Masses with their faces at 45 degrees with the meridian get some sunlight on all walls every day throughout the year. The increased height of the house block has no effect on the area of complete shadow but lengthens the shadow cast upon the ground or upon adjoining buildings.

INSOLATION ACCORDING TO SEASONS

The greatest infiltration of direct sunlight occurs through the South window during the winter solstice. Second in quantity of sunlight, is the East window in summer, admitting about 72 per cent as much as the South window in winter. With the total amount of infiltra-

tion in the winter solstice taken as 100 per cent, 15 per cent is admitted by combined East and West windows, 49 per cent by combined Southeast and Southwest windows, and 36 per cent is admitted by the direct South window.

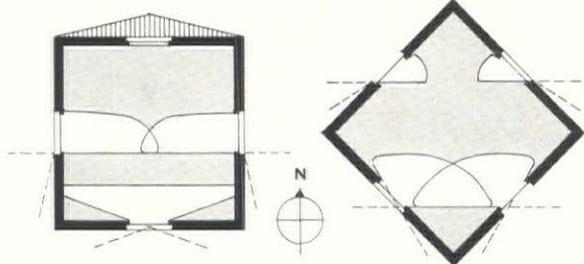


WINTER SOLSTICE

The hatched area indicates complete shadow without any sunlight at any period of the day throughout the season. The shadow is maximum on December 21st.

Hours of Sun Infiltration

East or West	3½ hours
Southeast or S. W.	6½ hours
South	9 hours

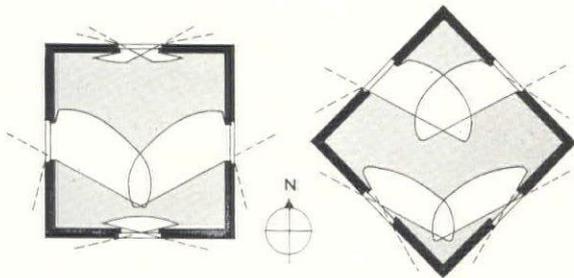


EQUINOX

The hatched area of complete shadow actually has its beginning and end at the equinoctial periods. As shown it coincides with the latter part of October and February.

Hours of Sun Infiltration

Northeast or N. W.	2½ hours
East or West	5 hours
Southeast or S. W.	7½ hours
South	9 hours

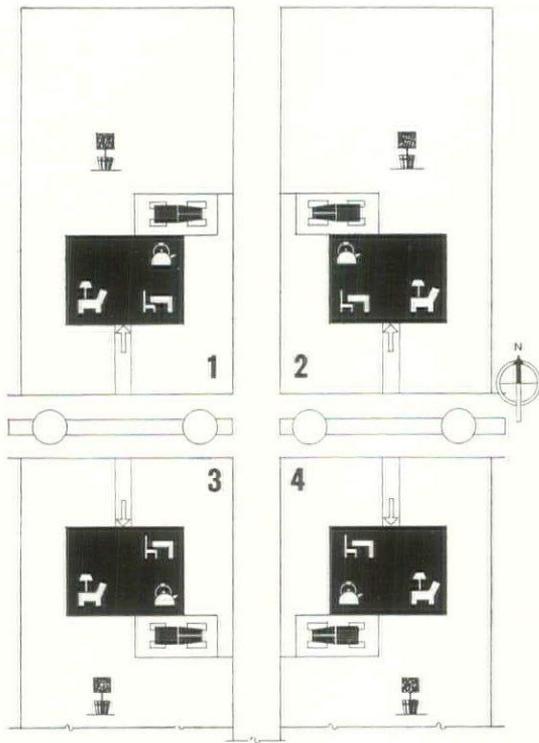


SUMMER SOLSTICE

There is no wall surface that does not receive sunlight at some period of the day.

Hours of Sun Infiltration

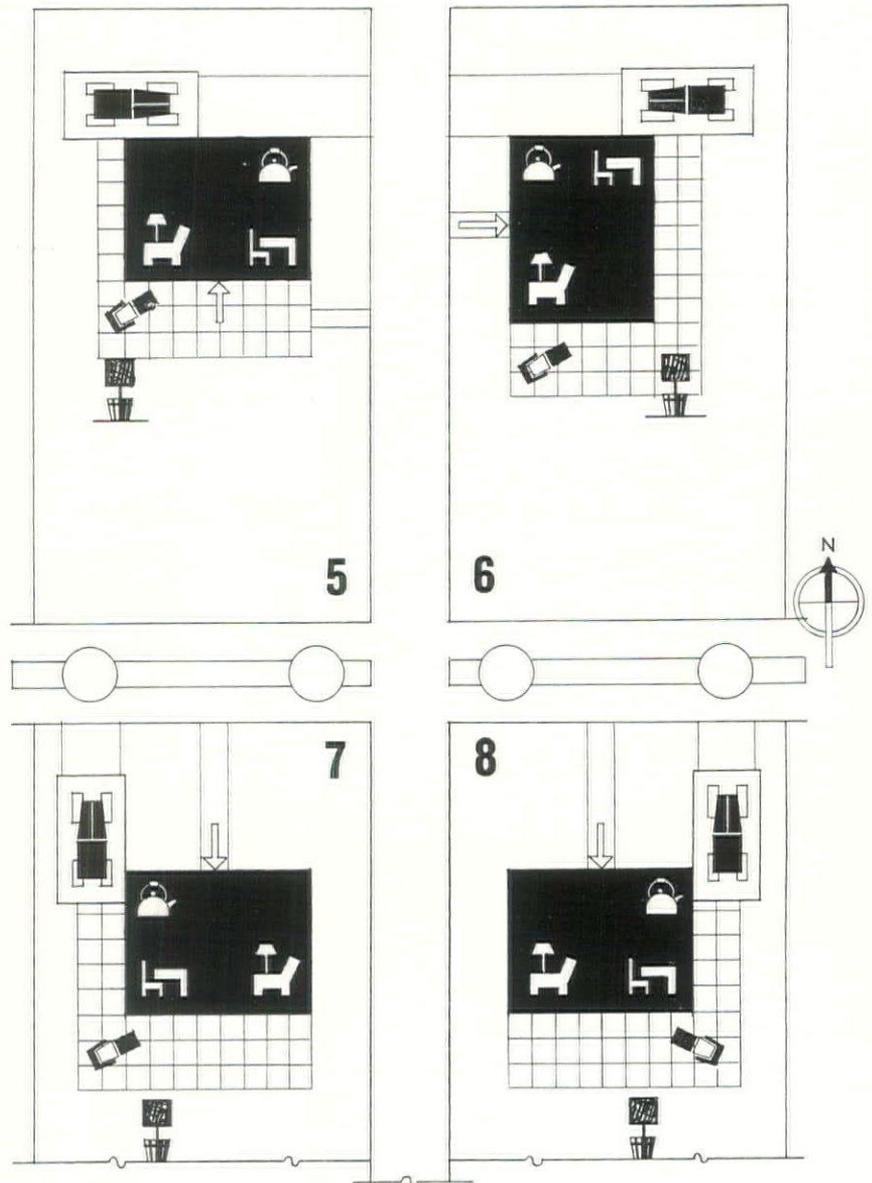
North	3 hours
Northeast or N. W.	5½ hours
East or West	7 hours
Southeast or S. W.	7½ hours
South	5½ hours



USUAL

These orientation studies are based on sunlight and directional exposures. Topography, prevailing winds, preferred view, and other factors important in completely studied orientation are not considered. The lot size is fifty by a hundred and it is assumed that the buildings cannot be erected on the side lot lines.

CORNER LOTS



PREFERRED

USUAL ARRANGEMENT

1—Rooms well oriented for sunlight. Living room and dining room are too close to the street for any privacy. Out-of-door living space at the rear would be in complete shadow six months of the year. The gardens to the North are not visible from any room except the living room.

2—As in location (1) there is not suitable privacy for the important sunlight façade. The kitchen is badly located on the West where it must be screened from direct sunlight during the period of its maximum use.

3—The garage location blocks much of the desirable southern exposure.

4—As in (2) the location of the kitchen is questionable; and again the garage location prohibits full advantage of the southern exposure. The service yard would necessarily be located within the view of the southern living room windows or on the minor street.

PREFERRED ARRANGEMENT

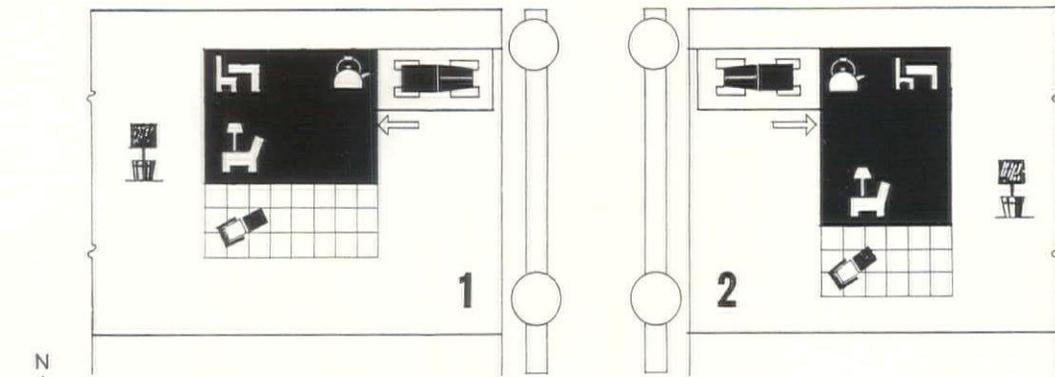
5—The house is kept back from the street to allow privacy for out-of-door living on a terrace accessible from both living and dining rooms.

Kitchen has northern and eastern exposures. Service yard is to the North, screened from the western terrace by the garage. Dining and living areas have southern, eastern, and western exposures.

6—The plot plan here could be the reverse of (5), but the changing of the long axis of the house has left more room between the East side of the house and the lot line and permits a better vista from the dining room. The kitchen has a western exposure but could receive all its light from the North.

7—Living and dining areas have southern, eastern, and western exposures; kitchen, northern. While eastern exposure for the dining room might be preferred it has been kept to the South and West for privacy. The service yard could be a walled area to the North or in the rear of the garage at the sacrifice of the western terrace.

8—As in (7) the living and dining areas are to the South, East, and West. If the long axis of the house were North and South more space could be added between the East façade and the lot line for a dining terrace screened from the North by the garage wall.



- | | | | |
|--|-------------|--|---------|
| | LIVING ROOM | | GARAGE |
| | DINING ROOM | | TERRACE |
| | KITCHEN | | GARDENS |

PREFERRED EXPOSURES

Living Room—South, Southwest . . . **Dining Room**—South, Southeast, or East . . . **Kitchen**—North, Northeast or East . . . **Bedrooms**—Except for the need of adequate ventilation, the exposure for bedroom windows is largely a matter of choice. Preferred outlook seems to be the controlling factor. Eastern exposure may inconvenience late sleepers. Childrens' rooms, particularly those used for indoor play demand direct sunlight, but West windows are not advisable in the rooms of young children who must go to bed while the sun is still shining.

INSIDE LOTS

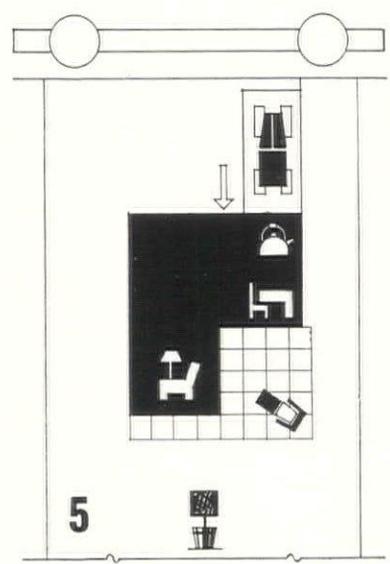
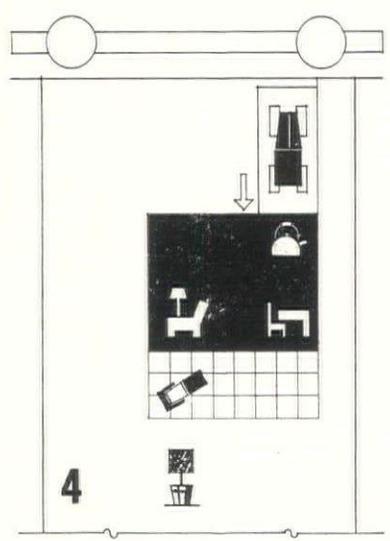
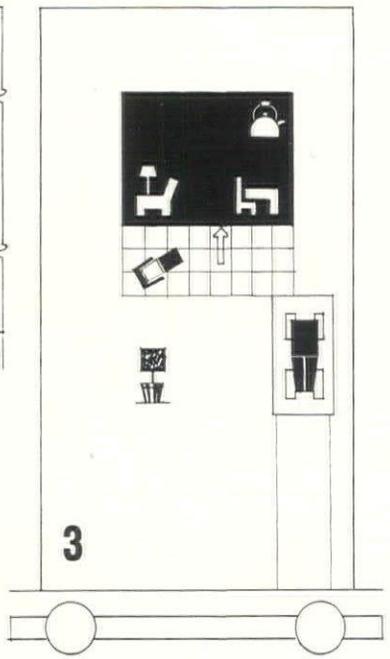
1—The living-dining areas have southern and western exposures. The dining area has been kept to the West so that it may overlook the gardens. If the garage had been kept completely to the North of the house the dining room could have been located in the southeast corner and the front door still kept adjacent to the garage.

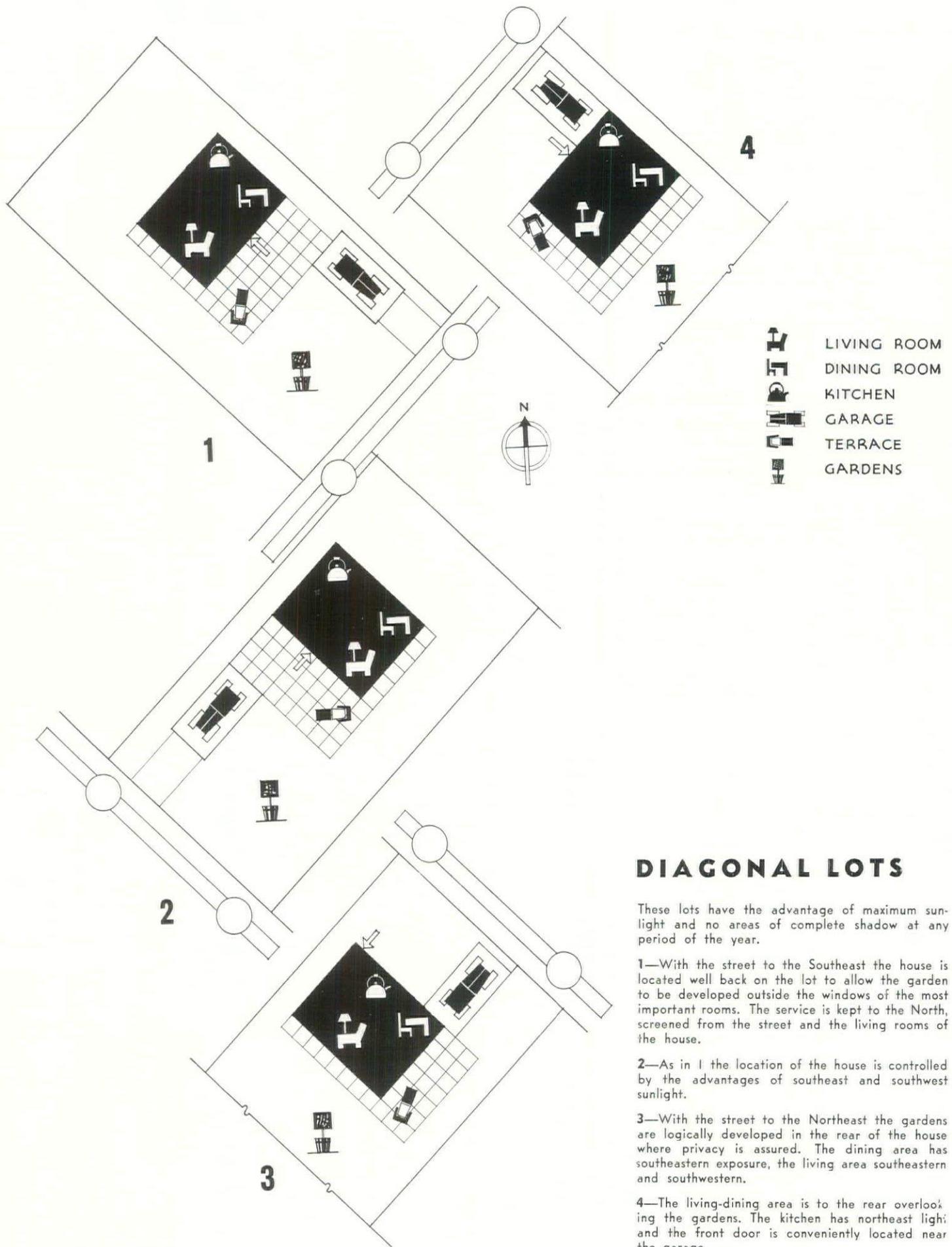
2—The living-dining areas have southern, eastern, and western exposures. Both overlook the gardens to the rear. The front door is conveniently accessible from the garage.

3—The living-dining areas have eastern, western, and southern exposures. The outdoor living terrace to the South has been kept well back from the street for privacy. The garage has been detached to allow a maximum exposure on the South.

4—The living-dining areas have three exposures with a terrace for out-of-door living to the South where it has privacy and seclusion. The front door is conveniently accessible from the garage.

5—The L-shaped plan with its greater perimeter allows more windows to catch sunlight. The living room may have southern, eastern and western exposures even when it is completely separated from the dining area. The dining room is South and East, and both look out across the gardens.





DIAGONAL LOTS

These lots have the advantage of maximum sunlight and no areas of complete shadow at any period of the year.

1—With the street to the Southeast the house is located well back on the lot to allow the garden to be developed outside the windows of the most important rooms. The service is kept to the North, screened from the street and the living rooms of the house.

2—As in 1 the location of the house is controlled by the advantages of southeast and southwest sunlight.

3—With the street to the Northeast the gardens are logically developed in the rear of the house where privacy is assured. The dining area has southeastern exposure, the living area southeastern and southwestern.

4—The living-dining area is to the rear overlooking the gardens. The kitchen has northeast light and the front door is conveniently located near the garage.

SITE PLANS

1—Straight Rows on North and South Streets

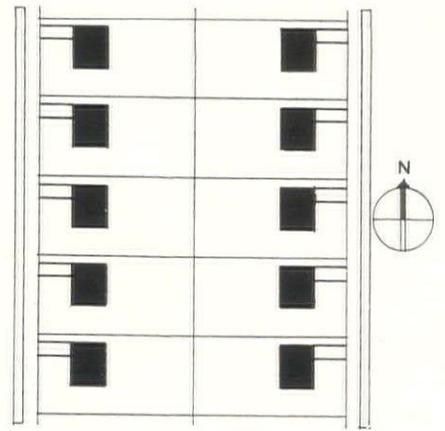
ADVANTAGES

Minimum length of drive to garage
Costs of utilities from street to all houses equal

DISADVANTAGES

Presents a crowded monotonous appearance
Southern exposure limited by the proximity of the neighboring house

1



2—The Stagger Plan for North and South Streets

ADVANTAGES (Lots East of Street)

No windows directly opposite each other in any two adjacent houses
No interruption of prevailing breezes
Vistas to the South open completely across the adjoining lot
Shadow conditions improved

DISADVANTAGES

Extra cost of utility services to alternate houses
Southern vista of alternating houses blocked by garage walls

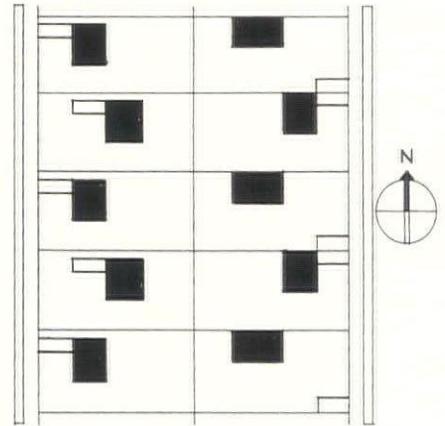
ADVANTAGES (Lots West of Street)

The stagger plan with adjoining garages utilizes a common wall
Uninterrupted southern vista for both houses
Larger house can be accommodated on lot without appearing crowded
Maximum South, East, and West exposures

DISADVANTAGES

Alternate houses have detached garages
Shadows cast by the house further back from the street on late winter afternoons and by house close to street on winter mornings

2



3—Straight Rows on East and West Streets

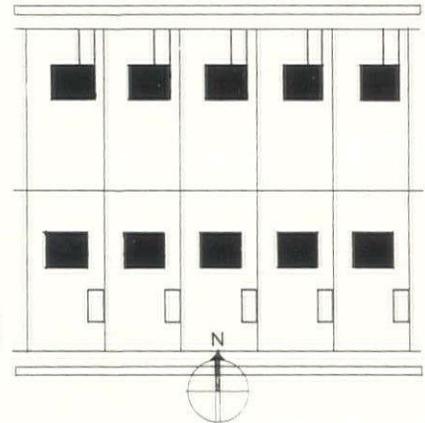
ADVANTAGES

Uninterrupted southern exposure
Uniform length of utility runs from street
Minimum length of drives to the garages

DISADVANTAGES

Lack of privacy because of windows of neighboring houses
Monotonous appearance
Shadows cast morning and afternoon by each house upon the one adjoining

3



4—The Stagger Plan for East and West Streets

ADVANTAGES (Lots South of Street)

Maximum South, East, and West sunlight
Privacy for southern terraces by screening from the street and adjacent houses

DISADVANTAGES

Bad shadow cast by the house further from the street on late winter afternoons
Irregular utility runs

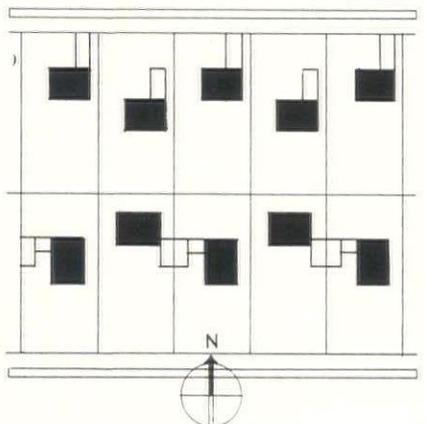
ADVANTAGES (Lots North of Street)

The stagger plan with adjoining garages
Maximum South, East, and West exposures
Open vistas in all four directions
Larger house on the lot without cramping

DISADVANTAGES

Long drive to garage and long utility runs from street
House forward on lot may need covered connecting link to garage

4



PLANS WITHOUT PICTURES

A UNIQUE series of 80* selected small house plans classified for architectural use in the selection of basic types and variations to fit clients' needs. They represent the 4 most universal small house requirements, viz—

- A. The 3-Bedroom House, no servant's room
- B. The 3-Bedroom House, plus 1 servant's room
- C. The 4-Bedroom House, no servant's room
- D. The 4-Bedroom House, plus 1 servant's room

Possible permutations and combinations of plans are infinite and no one volume could possibly present all that are good. The selection has been limited to plans that have been found most universally acceptable. They offer no substitute for the architect's creative imagination applied to the requirements of a particular client.

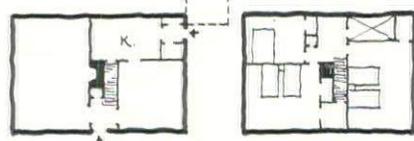
Pictures are purposely omitted because the solution of the PLAN problem is the important factor in the functioning of any house. Pictures while they intrigue and attract, also confuse and distract, putting an over-emphasis on appearance rather than use. No indication of fenestration is shown as windows must be dictated by orientation, use, furniture arrangement, vistas, prevailing breezes and climate. Likewise without pictures the "style" (which should not be considered until the best possible plan solution is found) does not dazzle the client or befog the issue. Small house "catalogs" of pretty pictures confuse the public which is unable to compare possible solutions because of the heterogeneous and unorganized presentation of all sorts of plans. It is the architect's duty to solve the planning problem first, then to produce the picture of the house for the client.

Plans that work,—plans for two-story houses found adequate and desirable by the average small house owner are shown at the same scale for comparison and selection as a basis for development. They are arranged for convenient study and analysis. Properly used they will save untold time.—time usually spent in trial and error sketching to make the second plan fit the first—or vice versa. All of the plans show the living room at the left to facilitate direct comparisons and to determine which type of plan will produce the better house for the particular client's needs. In addition to grouping the plans according to size, they have been grouped conveniently according to shape, i.e. (1) rectangular, with central entrance; (2) rectangular with entrance near the corner of the front; and, (3) L-shaped, with entrance usually near the re-entrant angle. Some include garages as integral parts of the houses, others are adapted to attached or detached garages which may be placed as indicated by dictates of orientation and convenience.

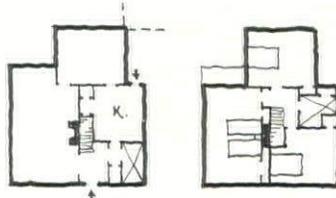
To aid in the architect's solution of the problem of planning and to aid in his discussion of plans with his client, this unique study is presented.

3-BEDROOM WITHOUT SERVANT'S ROOM CENTRAL HALL TYPE

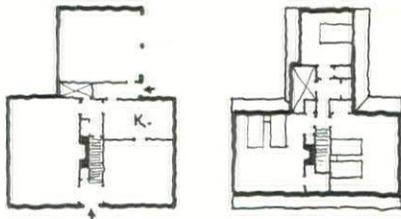
Rooms are compactly planned around central chimney. Distance from kitchen to living room is long, dining room used to reach front door. Second floor convenient and adequate.



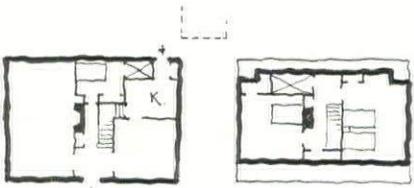
Compactly arranged, around central chimney, for good circulation. Kitchen and second floor bath have same plumbing stack. First-floor lavatory is accessible to both living room and kitchen.



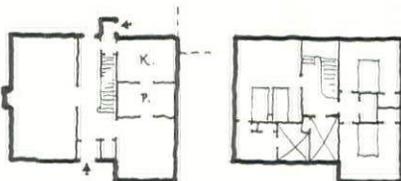
Well arranged for traffic flow and easy accessibility to lavatory and garage. Entrance vestibule, small, front door must swing across dining or living room openings. Coat closet small.



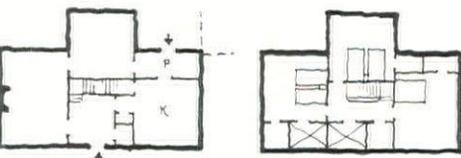
Combination of centrally located chimney and a "through" hall. The little guest room, or study, on the first floor is well worked into the plan.



Through hall provides a long vista and adapts itself to a garden entrance, but increases cost. Pantry large in proportion to size of other rooms, but could be used as breakfast nook.



A large entrance hall creates hospitable air, but demands furnishing. Kitchen convenient to front entrance. Bright rear dining room. Ample closet space in bedrooms.

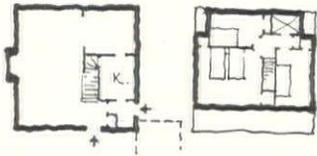


Each of the 80 plans can be adapted to any orientation of site by turning the page, or by reversing the plan by making a sketch tracing and turning it over, again revolving the plan for street or compass considerations. A simple way to see the plan reversed is to view it in a small mirror held vertical to the page. *Plans compiled, analyzed and drawn to scale by Raymond Baxter Eaton

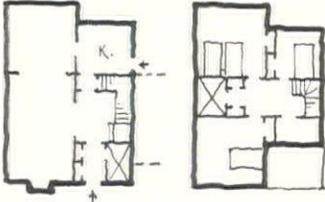
3-BEDROOM WITHOUT SERVANT'S ROOM SIDE HALL TYPE



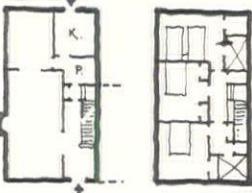
A very compact arrangement inevitably demands some compromise. This plan is simple and space-saving. Oddly shaped second-floor hall necessary for the doors to the bedrooms.



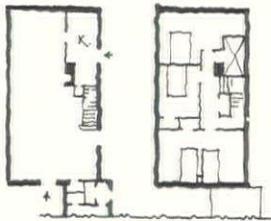
The spacious hall area is well related to the living room-dining room area. The stair makes it a major architectural feature. Good linen and utility closets flanking upstairs bathroom.



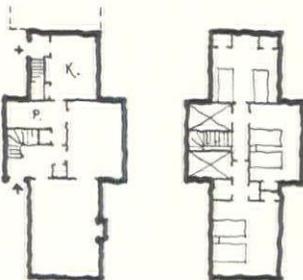
Good basic plan for narrow lot, service areas on one side. The circulation and room sizes are good. One bedroom has single exposure. Two baths, but no first-floor lavatory.



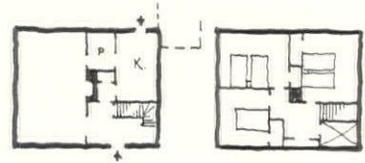
An absolute minimum of interior partitions increases apparent size. One must traverse the living area to go from kitchen to front door.



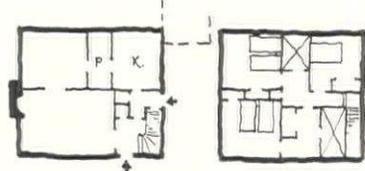
The placing of the dining room and bedroom above to get better ventilation and view is worth while. Visitors pass living room windows to reach front door.



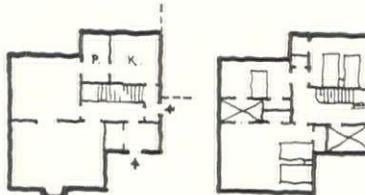
Compactness by the elimination of the separate dining room. In such cases a combination dinette and pantry is often possible. The second floor hall is somewhat broken up.



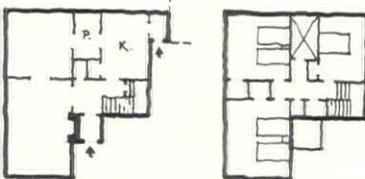
Desire for a conventional elevation probably dictated the poor location of fireplace. Second floor has two baths, but owner's suite needs re-study.



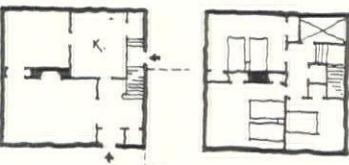
An unusual disposal of rooms in relation to the entrances. One must enter the living room more or less on the rebound. Every room has cross-ventilation.



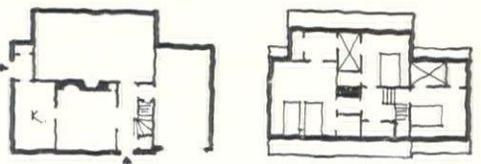
Straightforward arrangement of rooms and a minimum of hall space. The proximity of the kitchen to the front entrance is well handled. A downstairs lavatory could well have been included.



Square plan and central chimney make for economy; simple framing. Good corner rooms. Closet space properly allocated. Single plumbing stack an economy.

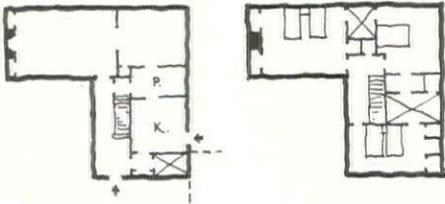


Spacious although compact. The living room has excellent possibilities for placing furniture. One room is over garage. Closets large and deep.

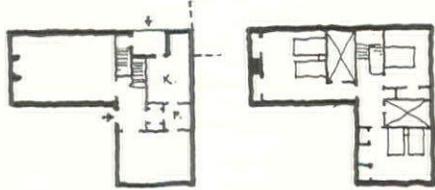


3-BEDROOM L-SHAPED TYPE

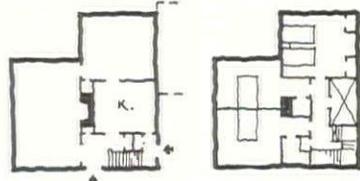
Long hall to large living room; coat closet and powder room lavatory at right. Good kitchen and pantry. Second floor has properly proportioned closet space. Large baths.



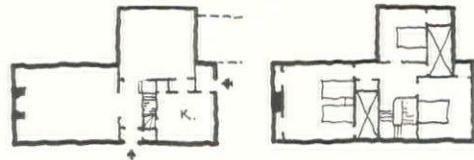
Front entrance well screened from street. Living room isolated, hard to use with dining room. Pantry is small, but a buffer between kitchen and dining room.



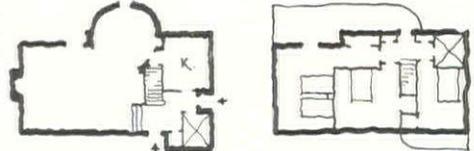
Convenient plan with first floor rooms easily accessible. Stair occupies a corner. Second floor easily restudied to eliminate waste halls in rooms and enlarge master's room.



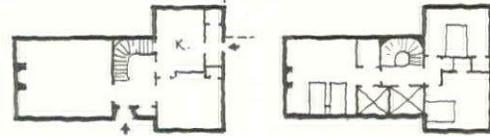
A good arrangement when it is desirable to place the kitchen in the front of the house. The stair is well handled. The size of the rear bedroom is decreased by large bathroom.



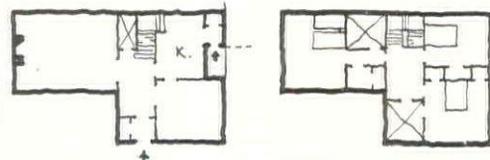
Clever modern arrangement which is gaining in favor. The circular dining area is in reality an integral part of the living room. Much depends on the use of material in building such a house.



A simple and direct plan with large hall and winding stair. All rooms are well-related to the whole and many good furniture arrangements are possible.



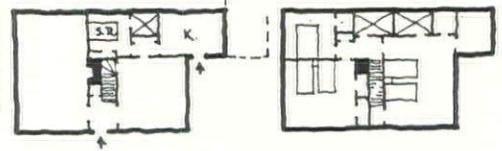
Kitchen is awkwardly cut into. Room disposition makes for easy construction. Entrance cramped but hall large. Door to the lavatory is rather prominent.



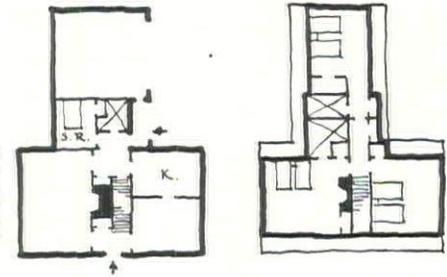
3-BEDROOM AND SERVANT'S ROOM CENTRAL HALL TYPE

SCALE
10' 5' 0' 10' 20' 25'

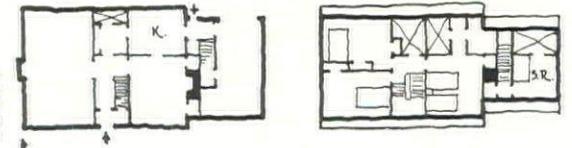
The location of the servant's room is novel. Cellular door opening from dining room is unfortunate. The bathrooms are well placed over the first floor plumbing.



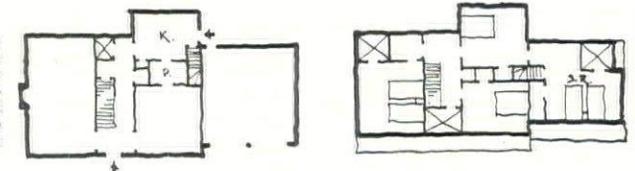
Central chimney plan with garage and bedroom at rear of house. Economical second floor hall; circulation is good. Attractive master's bedroom.



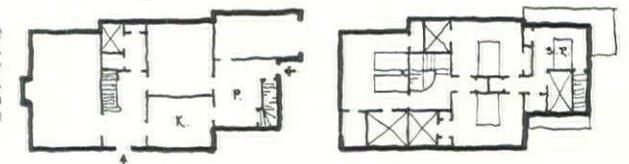
Direct convenient plan. The central entrance to the living room is not good from the furnishing standpoint as it seems to cut the room in half.



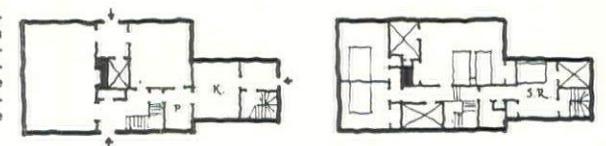
Plan somewhat loosely woven. The distance from living room to lavatory and closets might be objectionable. Well located servant's bedroom is large enough to provide for a couple.



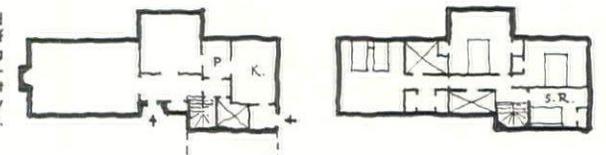
Large pantry makes it an excellent utility room. Kitchen more prominently located than dining room. Convenient bathroom with every bedroom suggests a hotel.



Unusual stair arrangement for this type of plan allows for a more gracious entrance hall. Kitchen has ample space for equipment and cupboards. All rooms have cross-ventilation.

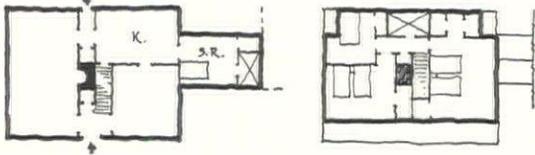


First floor is well planned but elongated type of house necessitated a long narrow hallway on second floor. The servant must use either a family or downstairs bathroom.

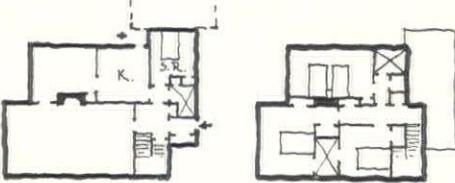


3-BEDROOM AND SERVANT'S ROOM SIDE HALL TYPE

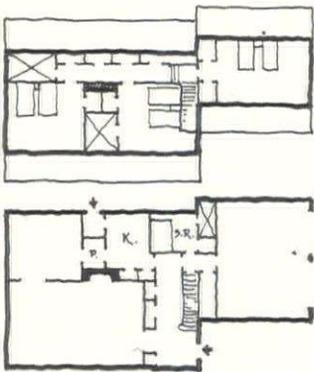
This plan reduces little used space to a minimum. It is the usual central chimney type with the addition of the servant's room as a wing. Good closet space in the bedrooms.



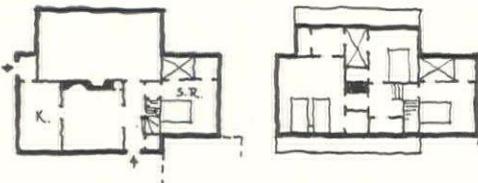
Side entrance produces an air of privacy which suggests a more informal treatment than is commonly associated with this type of plan. Location of the dining room opening mars its general excellence.



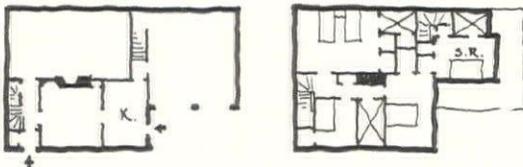
Expansive plan treatment. The lack of a lavatory on the first floor and the long distance from the room over the garage to the nearest bathroom are unfortunate.



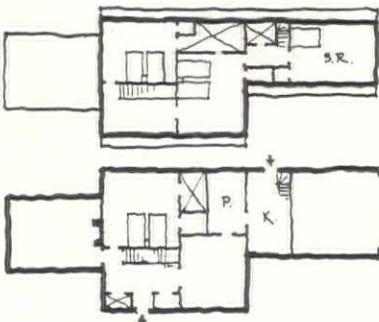
Servant's room located in the family end of house would make it an excellent guest room. Kitchen is isolated. Bedrooms are well shaped and have adequate closet space.



A small door to the living room at the foot of the servant's stair would ease circulation. Small bedroom without cross-ventilation is necessary with this stair condition.

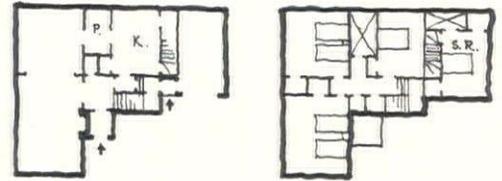


Cross-ventilation well worked out. First floor plan would be more compact if kitchen were more convenient to living room in opposite wing.

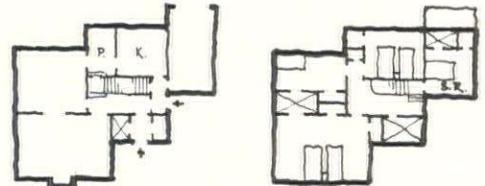


3-BEDROOM AND SERVANT'S ROOM L-SHAPED TYPE

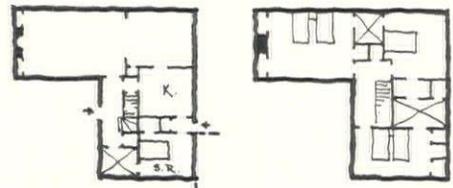
Unusual minimization of hall space for a house of this size. Second floor plumbing is well related to that on first floor. Small bedroom between the two baths poorly ventilated.



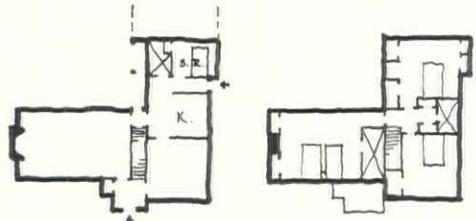
Well worked out arrangement which precludes the necessity for a secondary stair. By rearranging the closets, cross-ventilation could be obtained for the rear bedroom.



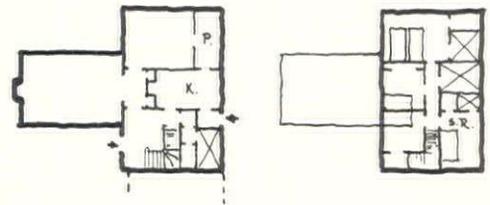
Full possibilities of the living room and dining room at the rear are realized. Servant's bedroom at the front on the first floor requires a screen of planting.



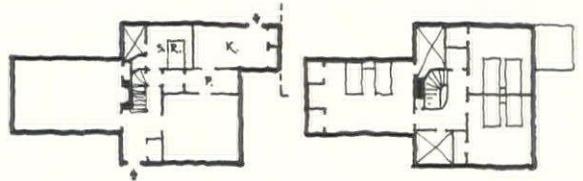
Economical use of hall space cramps the entrances to both the living room and dining room. Bedroom arrangements are well worked out.



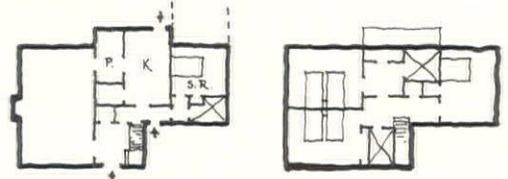
Good plan somewhat sacrificed for symmetry. Kitchen is deep in relation to its window area and pantry uses a valuable corner. Money for extra plumbing might have been used for extra cubage.



Fireplace near entrance to living room and distance from kitchen to living room and front door are this plan's weak points.



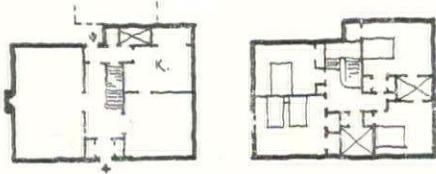
When separate dining room is lacking, the dining end of the living room should be emphasized. This plan is otherwise reasonable. Excellent relationship of servant's room to kitchen.



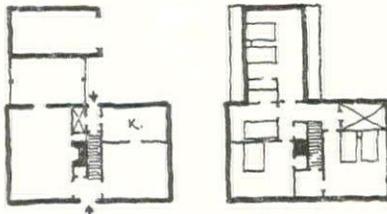
4-BEDROOM WITHOUT SERVANT'S ROOM CENTRAL HALL TYPE



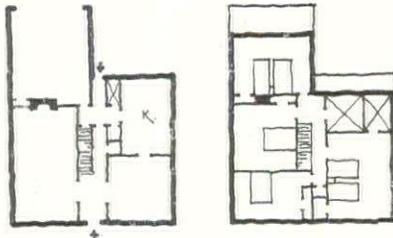
Direct center hall plan with the addition of lavatory and breakfast room. Bedrooms are all a good size. The desirability of a bath connecting two rooms is questionable.



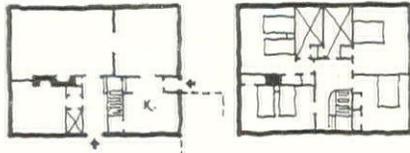
Space necessary for a fourth bedroom is gained over living room porch and garage. Minimum of hall space. Lavatory rather inaccessible.



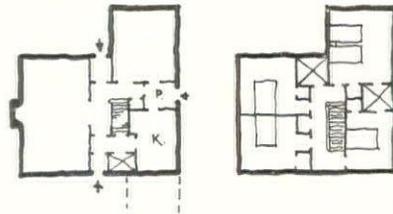
Living room has end chimney. Kitchen, two baths and lavatory on one plumbing stack. One main bedroom has window on but one side.



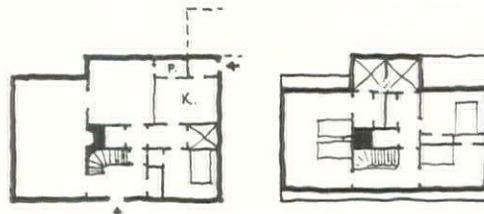
An unusual arrangement for plan with central hall includes study or guest bedroom on first floor. Stair available from kitchen as well as hall.



Complicated hall area with multiplicity of doors. First floor rooms isolated from each other. Side entrance lessens pantry's usefulness.

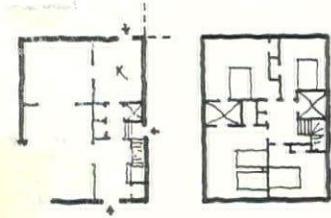


Stair arrangement makes an attractive feature of the hall. Guest room on the first floor has bathroom conveniently accessible for use as a lavatory.

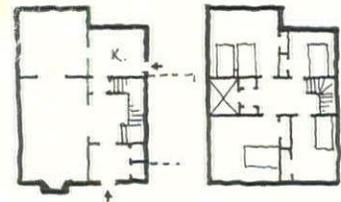


4-BEDROOM WITHOUT SERVANT'S ROOM SIDE HALL TYPE

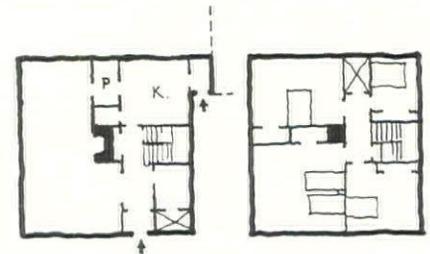
Direct center hall with a logical arrangement of rooms. Good space, entrance close, master's room deep.



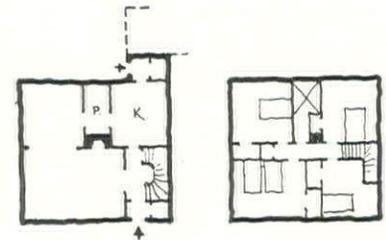
The arrangement of rooms is good. Space in the halls and entrance foyer excessive. Two bedrooms quite small. Closet problem well handled.



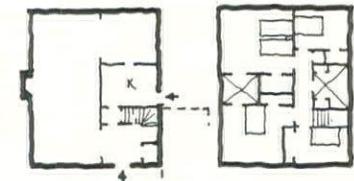
Compact and livable house has an unusually shaped living room because one end is used as a dining room. Study is useful as cloak room when entertaining, or as guest room. Large closets.



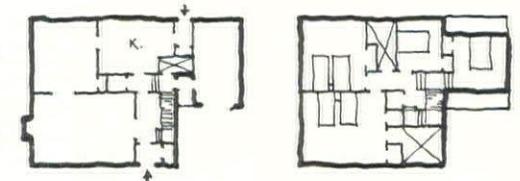
First floor plan open, spacious. Fireplace in awkward place for use and furniture grouping. Second floor hall small and tight.



Long open living room and dining room give an unusual air of spaciousness. The plans of both first and second floor are simple and straightforward. Two bedrooms are small.

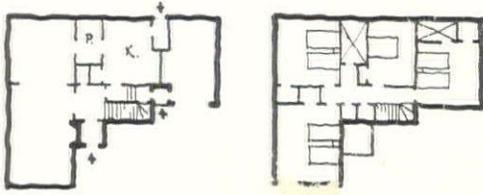


Rooms conveniently related. Lavatory, and steps to garage are well hidden but accessible. The occupant of the bedroom over the garage must use steps to bathroom.

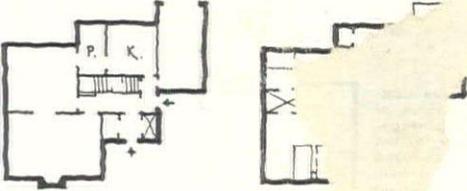


**4-BEDROOM WITHOUT SERVANT'S ROOM
L-SHAPED TYPE**

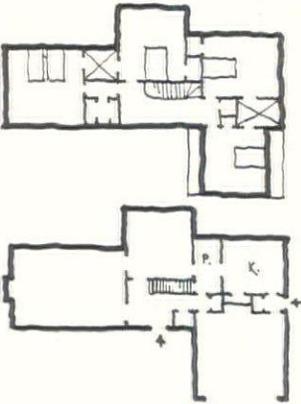
Living room and dining room are practically one and the effect is good. Minimum halls. Partitions arranged for easy framing. Large closets well placed (except master's).



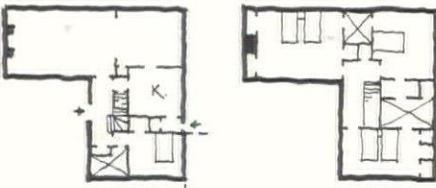
Room over garage is utilized as a guest room. Carrying garage wing to two stories limits a major bedroom to one exterior wall. Good first floor grouping.



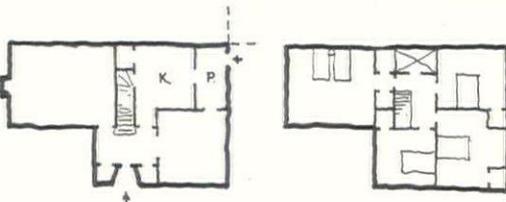
Logical sequence of rooms is apparent. Lavatory on the first floor would improve the plan. Bedrooms are large and airy and closets well placed.



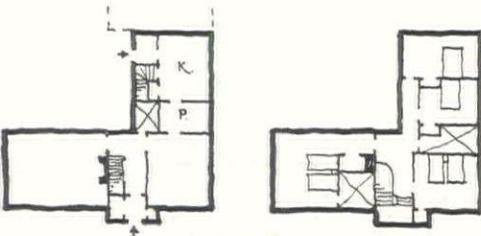
Guest room on the first floor increasing in favor. Develops an air of privacy in small houses and its bathroom can be used as a downstairs lavatory.



Compactly planned with little waste space. Stair on front door axis lessens prominence of entrance to living rooms.

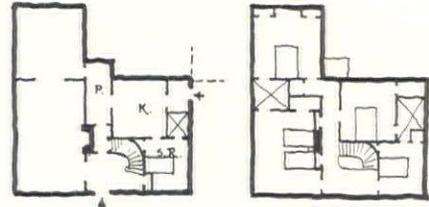


Excellent grouping of rooms. Reversal of stair would decrease second floor hall spaces. Lavatory prominently placed on entrance axis.

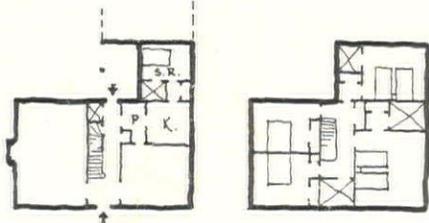


**4-BEDROOM AND SERVANT'S ROOM
CENTRAL HALL TYPE**

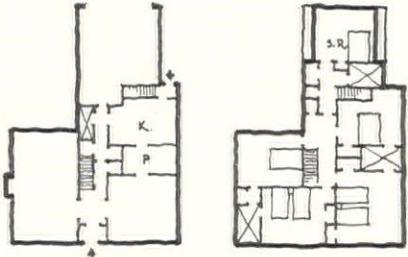
Spacious room grouping. Kitchen and bedroom in corner would have improved plan. First floor hall well proportioned to other rooms.



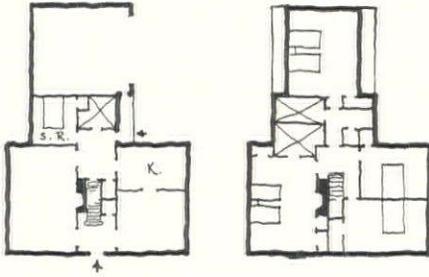
Simple and straightforward solution of the problem. Rooms well proportioned and rear bedroom nicely handled because of the downstairs porch.



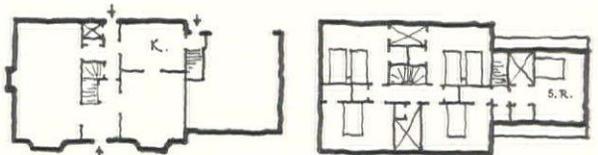
First floor well arranged. Corner bathroom prevents a principal bedroom from receiving adequate cross-ventilation. One bathroom might open on the hall.



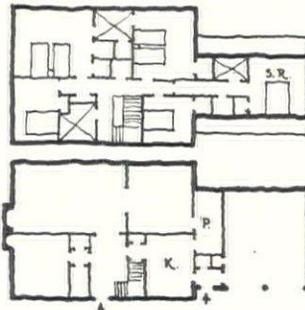
Plan has little waste space and rooms are well related. The circulation is excellent and the entire plan is conveniently arranged. Relation of servant's room to kitchen is good.



Well worked out symmetrical plan. Dining room has one exterior wall with a large bay window. Space on second floor is gained by front overhang.



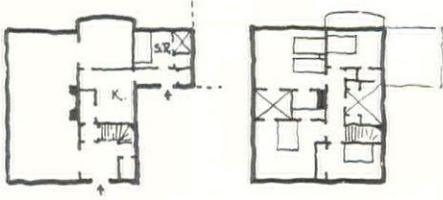
Relation of the kitchen to front and side entrances well handled. Secondary entrance on the front is subordinated by being set back. Elongated second floor hall.



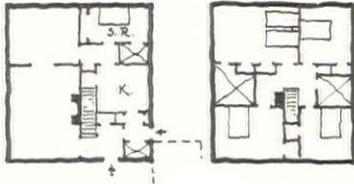
**4-BEDROOM AND SERVANT'S ROOM
SIDE HALL TYPE**

**4-BEDROOM AND SERVANT'S ROOM
L-SHAPED TYPE**

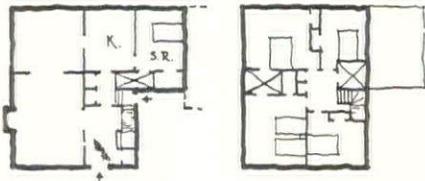
Large living room an excellent feature. Kitchen seems small and cut up. Location of servant's bedroom is good in relation to kitchen.



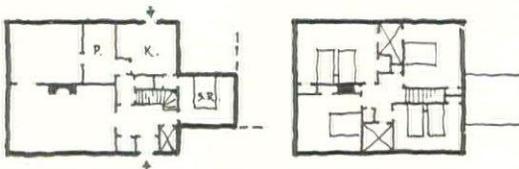
Compact and workable plan for a many room house. Living room appears small in proportion to the rest and must also serve as a passage from hall to dining room.



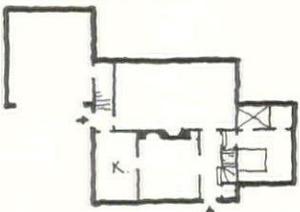
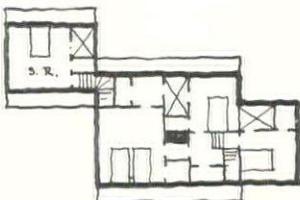
Economical handling of space and well related rooms make this compact plan good under all conditions. Secondary entrance is well disguised.



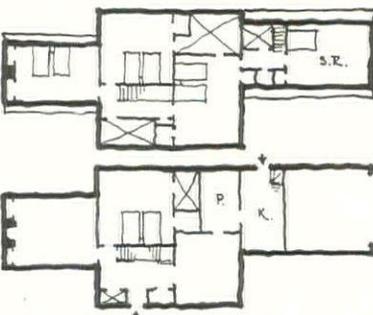
Lavatory in prominent place. Must be used by servants. Good bedrooms make second floor hall irregular in shape.



Isolation of the servant's wing is well handled. Closet space is ample and there is little space not utilized to its full extent. The rooms throughout are nicely proportioned.

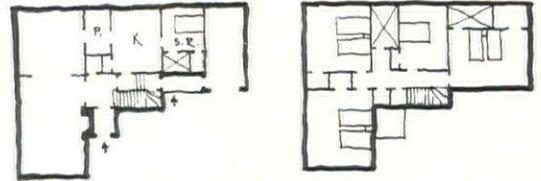


Entrance to the living room is subordinated by large entrance hall. The pantry large for kitchen. Bedrooms are large and airy, but closet space is small.

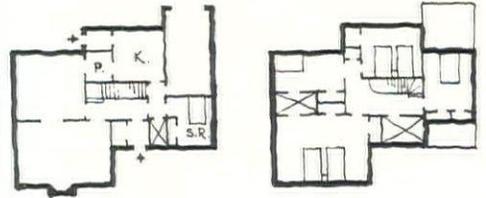


SCALE
10' 5' 0" 10' 20' 25'

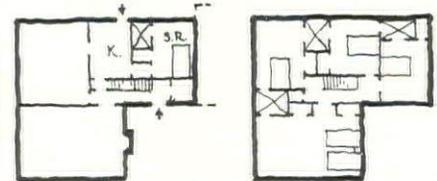
Excellent circulation marks plan. Four bedrooms on second floor usually dictate that one room be without cross-ventilation.



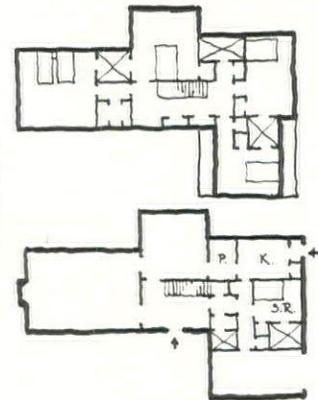
Bedrooms all have cross-ventilation by virtue of a clever plan arrangement. Rooms on the first floor are well grouped and are easily accessible from all points. Convenient coat closet and lavatory.



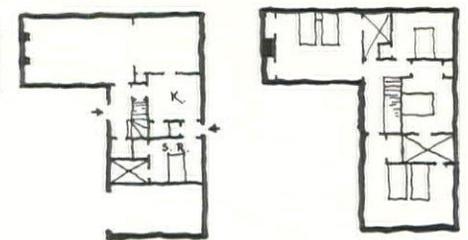
Compact and livable plan, but the advisability of having all the baths connect bedrooms is questionable. Adequate wall space in dining and living room fine for furnishing.



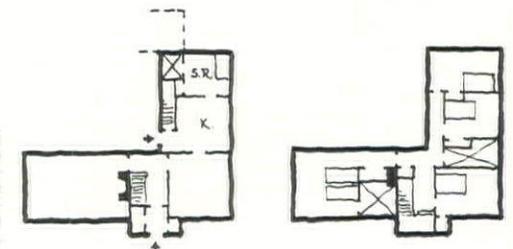
Much space is given over to halls and corridors. Plan suggests that more study would have resulted in a more closely knit house. Rooms are spacious and well related.



Easy circulation is readily apparent. Clever handling of the living and service features develops an unusual sense of spaciousness.



Entrances to the living and dining room tend to isolate these rooms. Despite the large through hall, dining room remains a traffic route from kitchen to front entrance.



CONVENIENCE AND SPACE

BY GERALD K. GEERLINGS

THERE should be no hesitancy in adopting anything traditional, or anything ultra-modern, so long as it has obviously good sense, it works and is well-designed. It is unfortunate that one school of thought disdains to profit by the experience of centuries, and the other refuses to recognize technical improvements, financial curtailments, and changes in the trend of living (such as the usefulness of a combined living-dining room). Problems are solved only by those with open, alert minds, and it is to be hoped, for the good of housing in general, that any tendency among architects to follow blindly the precedent set by their own work will be superseded by an eagerness to examine and appraise all new developments with unprejudiced eyes.

STAIRS: In the small house it is almost necessary to use the closed stringer type (between walls) for the sake of economy of installation, economy of heating (the stairs can be cut off with hangings), and ease of upkeep and cleaning.

MATERIALS: In making a selection, materials requiring a minimum of upkeep should be given first preference, particularly for the interior.

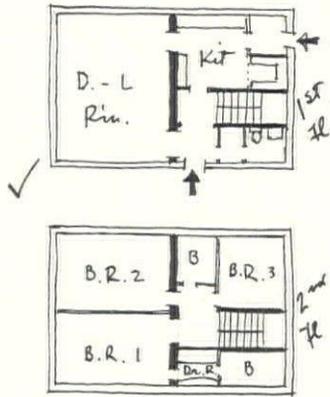
CHIMNEYS: A single chimney is all the small house can afford. An interior chimney can be planned so that the living and dining rooms need not be separated and it usually costs less than one on an outside wall. A flat slab on the top of the chimney (with openings in the sides) will prevent downdrafts and wet flues.

CEILINGS: The use of 3" x 8" or 4" x 6" joists exposed creates a desirable effect at little or no extra cost. Above the joists wall board or plywood can be used, followed by the rough floor, felt deadening, and then the finished floor.

FIRST FLOOR CONSTRUCTION: Modern heating equipment has become so compact that the value of a basement is debatable. A concrete slab raised above the grade is, of course, preferable to wood construction, but if joists are used a good precaution is to level the soil under them, then spread a layer of concrete to minimize the danger from rodents, termites and ground dampness. Between joists there should be a 4" fill of insulation to prevent cold floors. Ventilation is vital under wood joists.

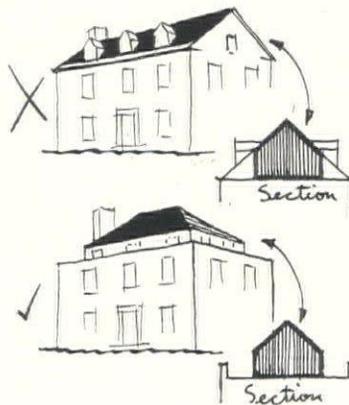
SYMMETRY: Straining to have chimneys in the center of a ridge, or windows equally spaced for the sake of the exterior is not so important as convenient and livable interiors.

FUTURE ADDITIONS: The plan should be so developed that when future rooms are added a minimum of tearing out becomes necessary. For example, future doors should be framed and trimmed as such, the window frames with readily removable panels below the stools.



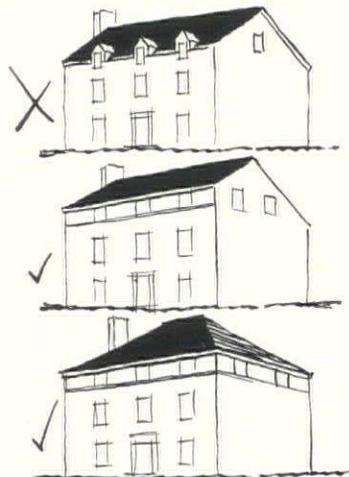
FRAMING

The plan should presuppose that all main partitions carry through to the second floor ceiling because framing will then cost less in both labor and materials. Partitions around closets and between bedrooms can be reduced in thickness by placing the studs the flat way when they are not carrying attic joists.



DORMERS BACK OF THE BUILDING LINE

If dormers seem necessary in the attic, there are a number of less costly solutions which will produce more light and better (uniform) head room. The sketches indicate that while dormers require regular spacing on the exterior, and produce cramped conditions and furnishing difficulties on the interior,—a continuous setback wall on one or more faces allows windows to be continuous, or placed as desired for the interiors. While these sketches are of 3-story houses, obviously they are applicable to 2-story ones also.

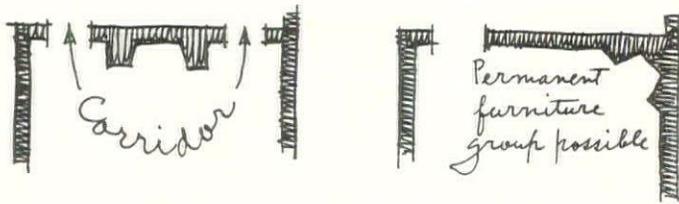


DORMERS ON THE BUILDING LINE

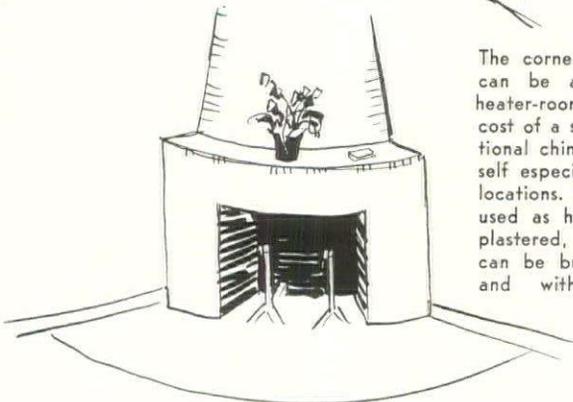
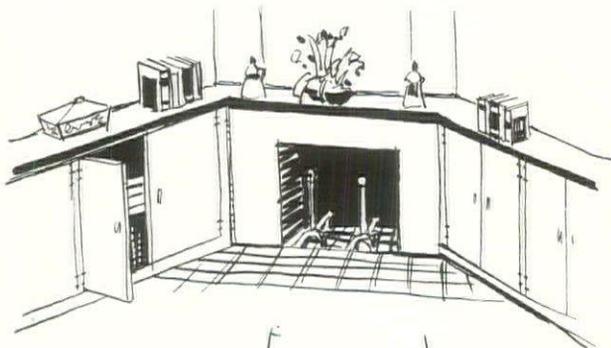
When dormers break through the cornice they are not only expensive, but the exterior façade becomes interrupted by a series of down-spouts, and the interiors become a series of broken surfaces. Two better possibilities are suggested,—the salt box type of gable roof, and the hipped roof with attic windows in a frieze just under the eaves. The upkeep of roofs having no dormers or other interruptions is considerably less than those which are broken up,—not to mention the initial cost (perhaps \$75 or more per dormer).

THE LIVING ROOM

THE FIREPLACE AND ITS PROBLEMS

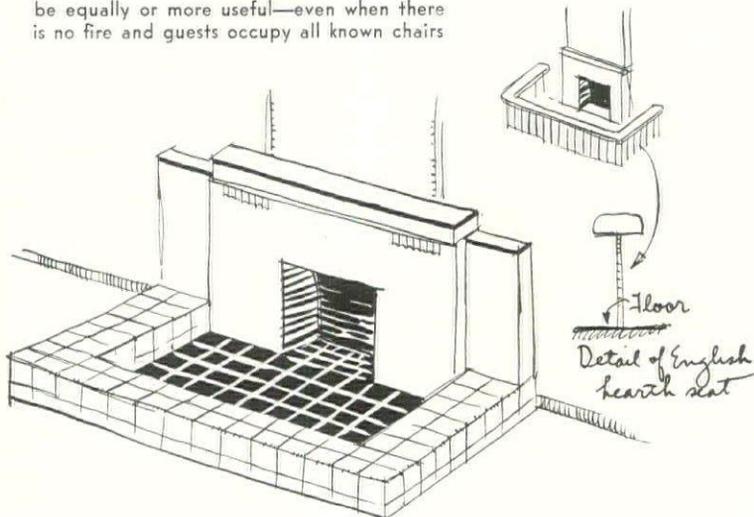


A fireplace at the end of a living room is almost useless when doors eliminate the wall space. Furniture cannot be placed for ready use and the floor space is a virtual corridor. Better move the fireplace to a corner and close up one door. Built-in cupboards endear themselves to all clients

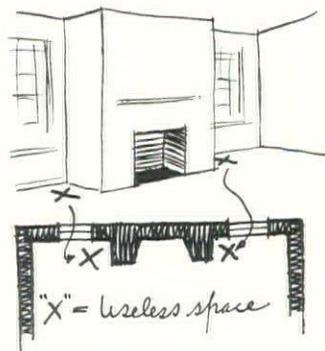


The corner fireplace often can be adjacent to the heater-room flue, saving the cost of a separate or additional chimney. It lends itself especially to bedroom locations. If the bricks are used as headers and then plastered, a curved mantel can be built inexpensively and with good effect

In England, where fireplaces are the sole custodians of the spark of life during the winter, they use a fireside seat, an upholstered affair mounted on iron spindles. We submit an American version which would be equally or more useful—even when there is no fire and guests occupy all known chairs

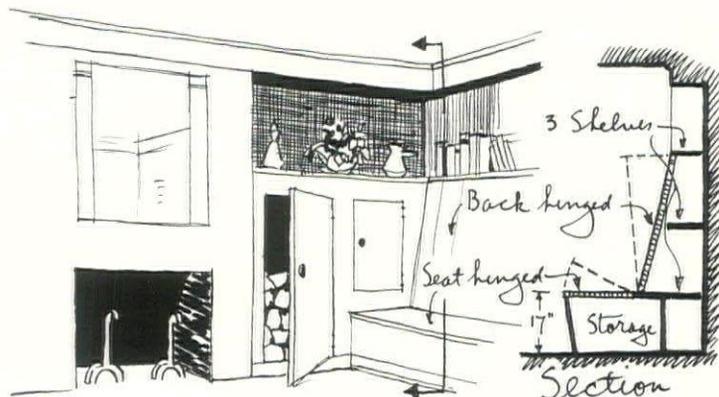


THE location of the fireplace in the living room is too often governed by reverence for an axis line. It should be determined by a realistic view of the best possible furniture arrangement, and not just to impress the Joneses. Ideally the fireplace should not project into the room, because the projection produces useless flanking floor-areas. Sometimes the mantel must come forward, in which case there are several solutions suggested here which either fit the unit into the corner, or else build cupboards and shelves in a flanking (and economic) maneuver. . . . As to width of living rooms in the small house, it is well to use 14' joists as a minimum, and 16' as a maximum; the room will not be pinched and will then lend itself to a plurality of purposes, guests and furniture arrangements.



A protruding mantel flanked by windows leads to the awkward dilemma of what to put in the corners (see "x" at the left) except a hat-rack and umbrella stand. Cupboards which have a wide top for aquarium, books and plants will coincidentally provide a *raison d'être* for mantel's projection

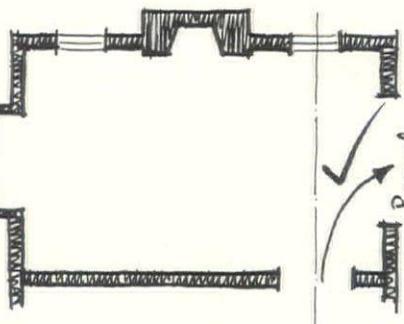
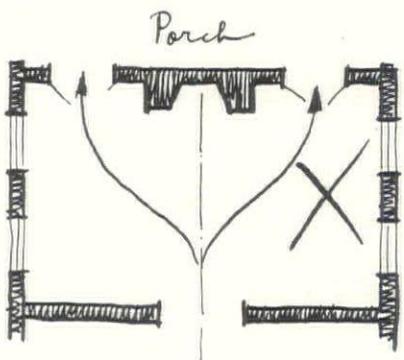
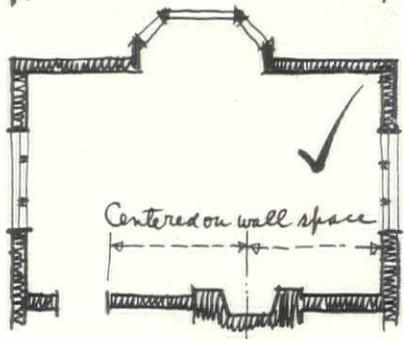
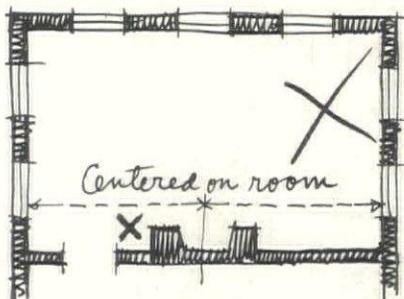
The fireplace's built-in seat can hinge and on swinging upward, provide valuable storage space. Let sloping backs also hinge and disclose a brace of shelves, on which may repose seldom-used or semi-precious articles. The detail can be sophisticated and the color in shelf recesses piquant



THE LIVING ROOM

It should be the compulsory lot of every architect to live in the living rooms designed by his most detested rivals. Then, on trying to arrange furniture sensibly, would he become aware of certain common faults. For example, there is the little matter of centering the mantel on the room, which results in a pretty adherence to academic rules, but often leads to a most difficult impasse for arranging furniture when a doorway gapes nearby. Another mistake is in making many small windows goose-step around a room, so breaking up the wall space that it will not harbor any sizable piece of furniture. No one should fail to make provisions for curtaining bays, or to detail wood window seats with means of keeping the seat cushions from sliding to the floor.

COMPARATIVE PLANS



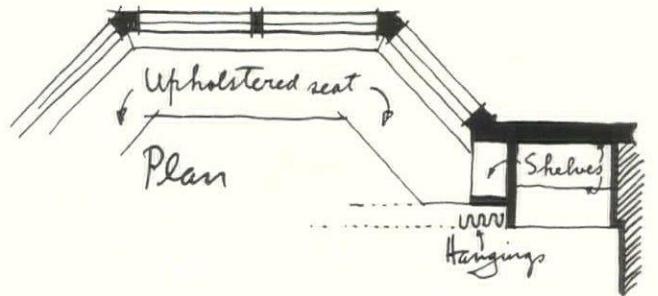
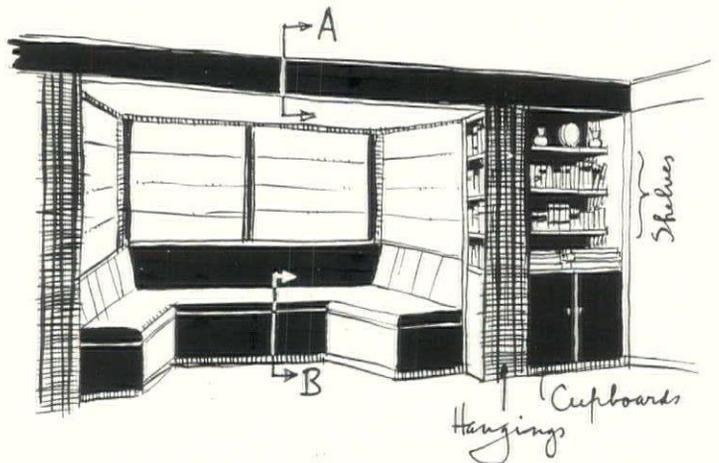
At "X" there is no room for any furniture except a smoking stand because the mantel is centered on the room (particularly vicious when the room is 18' long or less). One scans the wall space in vain for furniture moorings. If the window sills are low the neighbors outside will see the backs or projections of every sofa, desk or whatnot

In this better plan the mantel is centered on the wall space, permitting hospitable, permanent furniture arrangements on both sides of the hearth. Furthermore, concentrating natural light in generous windows or bays makes a much cheerier room than one letting light come in in dribbles

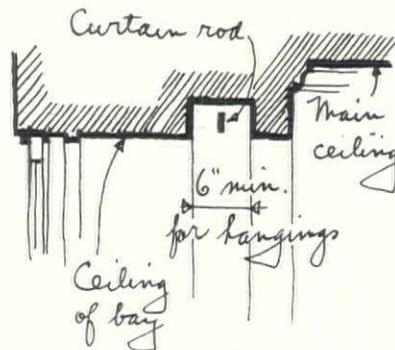
A doorway opposite a mantel is better on paper than in reality when the casual visitor invades the privacy of the family gathering around the hearth. The porch doors flanking the mantel make a corridor of the room, while the porch roof reduces the living room lighting to semi-gloom

A more sensible plan is to place the porch at the end and adjacent to the hall door so that circulation is reduced to a minimum. The visitor is intrigued by a view which whets the appetite for more, and the room is revealed by degrees—always better than to see the whole show at once

HANGINGS, SHELVES AND SEAT IN A BAY

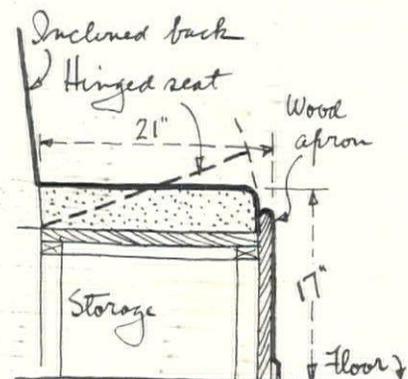


The pulled-back hangings will cut off about one-third the light unless care is taken to provide for them at a bay. If provision is made as shown it will cost not a cent, and the hangings will not only save heat in winter, but when drawn at night will give a differently pleasing aspect to the room



Section A-A

If a curtain rod is affixed to the ceiling of the bay, light shows between the surface of the ceiling and the top of the curtain, a disturbing crudity. There should be a recessed soffit for the curtain rod, a distinct gain in finesse at negligible cost



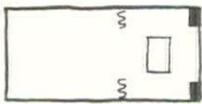
Section B-B

Comfortable built-in seats have upholstered cushions and sloping backs. At the top of the backs the window stools should not project. The wood seats are hinged at the back to give access to the storage space below. Allow 4" for the upholstered cushions, and provide an apron which projects so that they will not slip forward

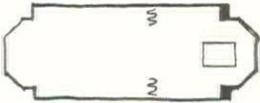
COMBINED LIVING-DINING ROOM

POSSIBLE SHAPES

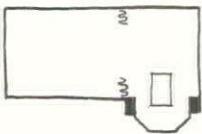
Note: Solid black areas indicate built-in china cabinets at dining end



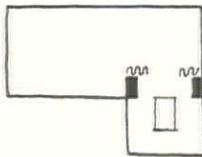
RECTANGULAR. This room can be divided by curtains or screens, and while inexpensive to build presents fewer possibilities for interesting treatment than others



RECTANGULAR WITH BAYS AT ENDS. Each bay may cost from \$125 up, but the room will seem larger and lighter, and well worth the cost.

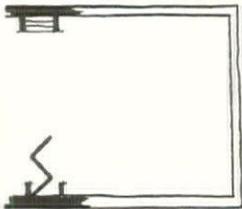


RECTANGLE WITH BAY AT SIDE. The advantage of this shape is that the table is off the long axis, and therefore more incidental and informal.



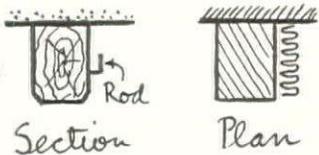
L-SHAPED. The enlarged dining alcove need not be as large as a separate dining room, yet when entertaining it will be a valuable part of the living room.

MEANS OF DIVISION

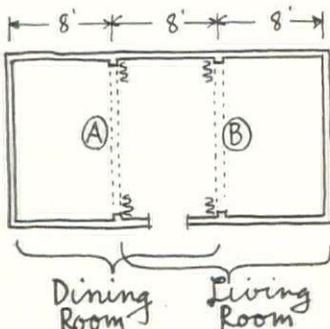


Curtains or screen may divide the room but in some cases folding doors may be advisable. If, between meals, the dining end is to serve as a day nursery, or a study, or if for reasons of heating economy it is desirable to shut off the dining end completely, the job can be done at reasonable cost with wood doors which fold into a boxed panel recess.

HANGINGS



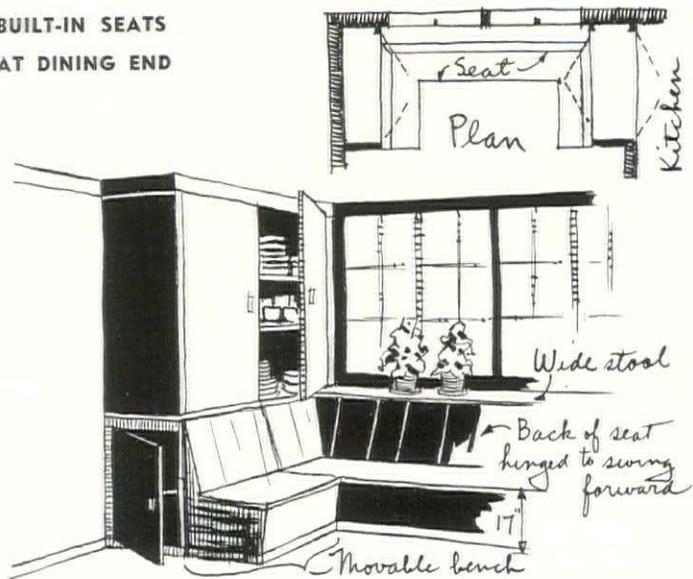
For a curtain rod or track, the simplest means is a beam as shown in the section. The curtains will appear to be well planned if there is some sort of break in the wall as indicated in the plan.



If the combined living-dining room is to serve on occasion for formal dining, the problem can be solved by having two sets of curtains as A and B in the plan at the left. On arriving guests find curtains A closed, while the finishing touches are added to the table. When dinner is served, curtains A are drawn back, and curtains B can then be closed and after dinner the process may be reversed.

TO be really successful the combined living-dining room must be so arranged that it will be both pleasant and comfortable at all times of day, even when table is being set or cleared. Merely to provide space for a dining room table and chairs at one end of a long room is not enough. The dining area as a part of the general living room should be useful, with its table, at other than meal times. If conveniently arranged, less labor is involved in setting and clearing the table, than in a separate dining room. This requires a thoughtful provision of cupboards, wide sills, shelves for decorative objects, glass or plants, and, almost more important, means of subdividing the room with folding doors, hangings or screens.

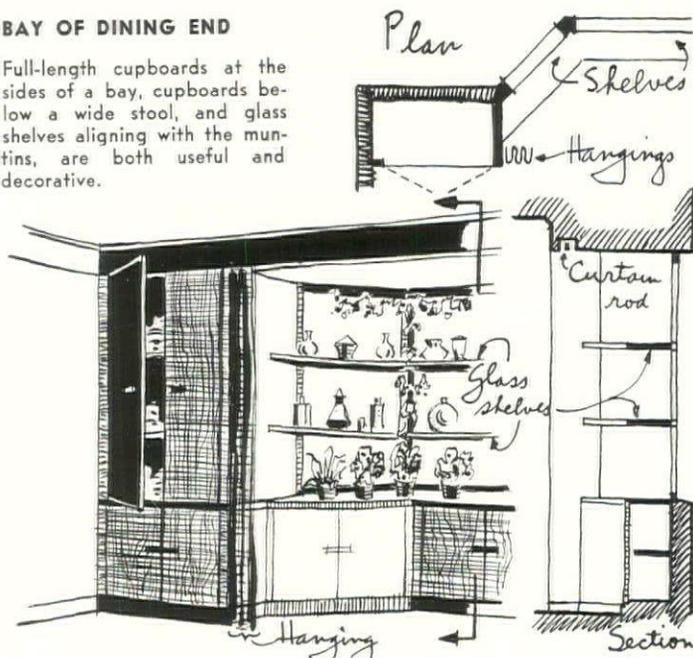
BUILT-IN SEATS AT DINING END



A dining end with built-in seats will be enhanced if a "passway" cupboard is adjacent to lessen work in setting the table and clearing it. A stationary seat is satisfactory on the window side of the table. If the seats on the adjoining sides are movable benches they will make for greater convenience and comfort.

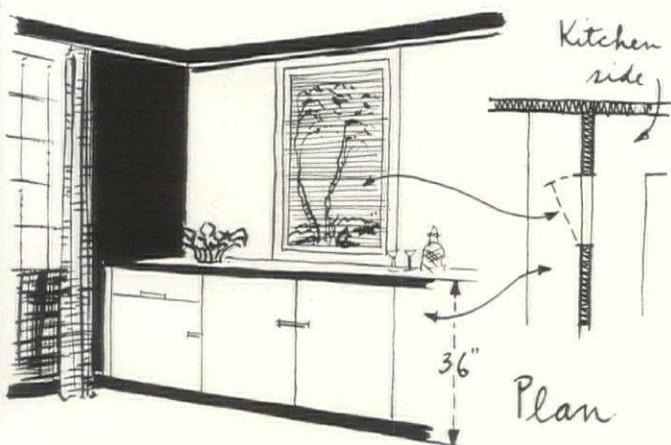
BAY OF DINING END

Full-length cupboards at the sides of a bay, cupboards below a wide stool, and glass shelves aligning with the muntins, are both useful and decorative.



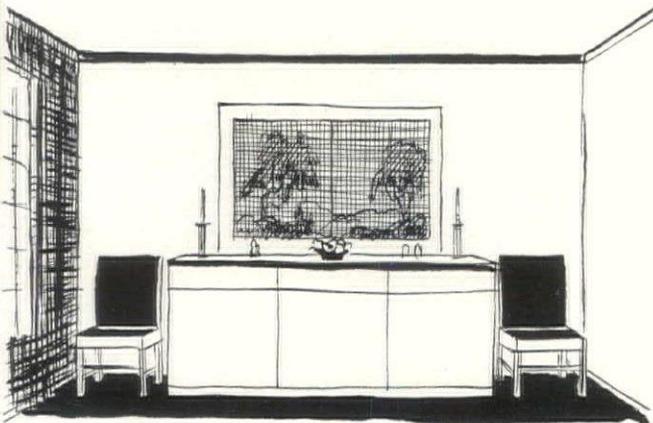
THE DINING ROOM

THE relation of dining room to living room is most important. In the small house to divide one from the other by stairs is to confine the use of the dining room to the serving of meals for a small group, whereas it should be able to be combined with the living room—for a large dinner party, for instance, or bridge, or dancing. If a dining room cannot be at least 12 by 12 feet it might better be an alcove off the living room. In the better house it should be as easy to serve a meal in the dining room as in an over-rated "breakfast nook," which may be eliminated. To make serving easier, plan the modern type of "passway cupboards," between dining room and kitchen, with doors on each side (refer to kitchen page also).



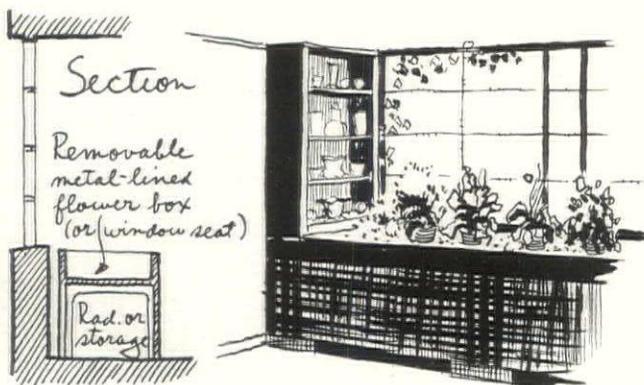
PASSWAY CUPBOARD AND BUILT-IN SIDEBOARD

Communicating doors behind decorative panels



Well-designed, built-in furniture is refreshing, efficient and comparatively inexpensive. The sideboard of plywood can be smart and simple. Above, a decorative panel which might cover the door or slide of the passway cupboard. Since kitchen work tops are 36" from the floor, this is a good height for the sideboard.

The built-in sideboard can be stopped short at each end to allow for extra chairs. In the sketch, the decorative panel is divided in the center to form doors to the passway cupboard. Sometimes it is better to have them slide, than hinged.



Gay flowers and potted plants can grace a wide dining room sill, particularly with a metal-lined flower box filled with pebbles around the pots (plants hold their moisture better, and gone are sills discolored from surplus water). The windows should run as near the ceiling as practicable.

POSSIBLE SHAPES

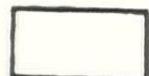
SQUARE. In general this is the most useful shape for any dining room, regardless of the shape of the table. Orientation should be South and East wherever possible.



SQUARE WITH ONE OR MORE CORNERS CUT OFF. Corner cupboards with glass doors are not happy unless the china is neatly arranged. Solid wood doors are more practical.



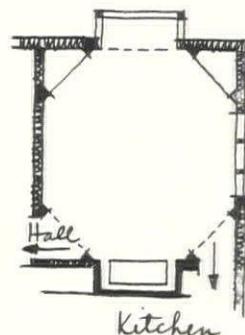
RECTANGULAR. This is likely to be inefficient and inconvenient unless just slightly off the square. If it must be this shape a wide, cased opening on one of the long sides will help.



SQUARE OR RECTANGULAR WITH BAYS. A bay can do more to enliven the dining room than expensive ornamentation, wall material or furnishings. Concentrated window openings make the room more cheerful and easier to furnish.



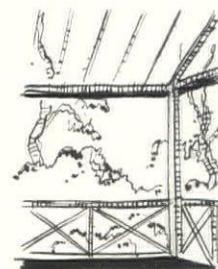
FORMAL ROOM. For the formal dining room, single or double corner cupboards sometimes are awkward. One good plan uses all four corners, two are cupboards, the other two doors. This eliminates a direct view of the table from the hall, or from the table into the kitchen.



DOORS. The most successful dining room is one which seems a part of the garden. This effect can be attained by a door leading to a terrace which is only one step lower than the finish floor. Plan the garden with the dining room vista in mind.

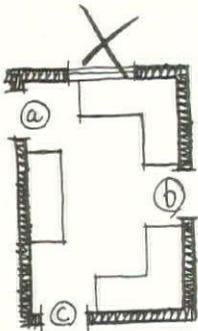


PORCHES. Why not have a porch off the dining room for easily served summer meals? The porch roof would darken the dining room? Then have a glass roof. In the winter the sides can be enclosed to form a conservatory.

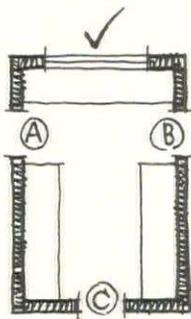


THE KITCHEN

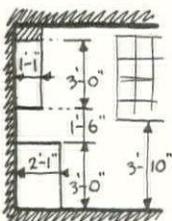
PLAN



One plan has 40 per cent more inside countershelf perimeter than the other, because of door locations. The left plan has "corner dead-spots," hard-to-reach-storage in corners (always a great loss of usefulness), while the right plan has direct accessible storage



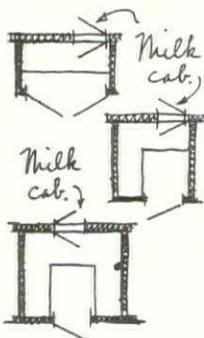
STANDARD DIMENSIONS



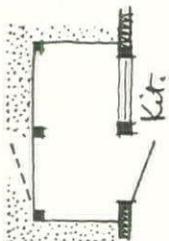
Some generally accepted dimensions are: countertop—36" high, 25" deep; vertical distance between countershelf and upper cabinets—18"; upper cabinets—36" high by 13" overall depth; toe-space—4" high by 3" deep. Ranges, 36" high but vary from 3'-2" to 3'-6" or more in length; refrigerators vary in all dimensions. (See Am. Arch. Time Saver Standards)



There should be at least one utility closet adjacent to every kitchen, but not in it. A special compartment for the vacuum cleaner will lengthen its life and keep all its accessories together. A new cheap kind of rack will allow brooms and mops to hang with handle-ends up. Shelf space for cleaning fluids and polishes will keep strange odors out of food

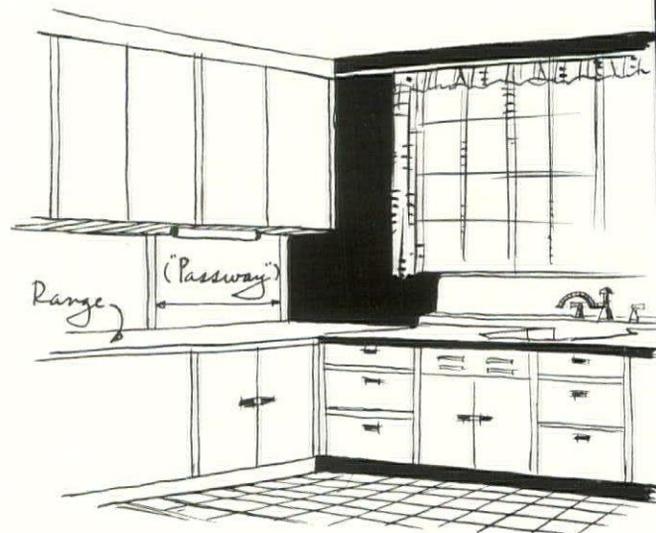


It is well to have a food storage closet adjacent to but not in the kitchen. On an outside wall, a milk cabinet, with two doors as shown will prevent milk from freezing on the door-step in winter, and will aid in regulating the coolness of the closet during the cold months. (The refrigerator may be too cold for certain foods, such as cheeses.) 12" is good shelf width

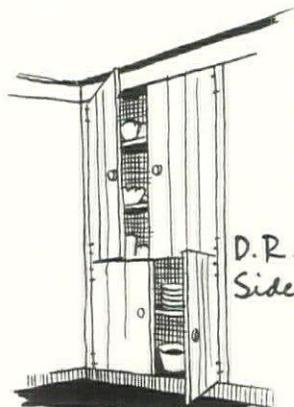
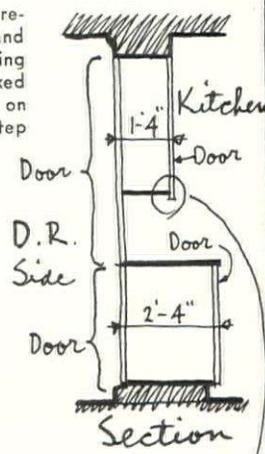
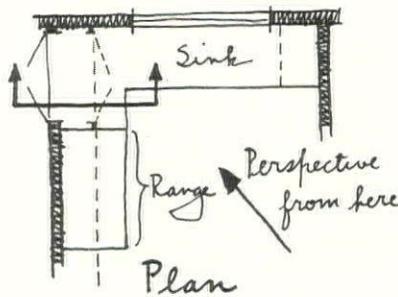


Ideally a kitchen should open on a small porch, screened in summer, glazed in winter, at least 3' wide for garbage and refuse cans, etc. If no porch, the interior door should be weather-stripped and the storm door should fit perfectly

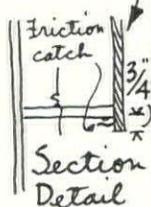
EVEN kitchen experts do not always agree. Diagrams often give proper "routing" for food preparation, but seldom follow "routing" food and dishes in the reverse direction. But for sensible small house kitchen planning one can keep in mind (1) room width—8' minimum; over 10' is seldom useful; (2) keep wall space uninterrupted; doors 2' away from corner so that countertop equipment can run to the wall; no doors should center on a long wall; (3) over a sink a cupboard may be more valuable and convenient than a window; and plumbing pipes can then be on an inside wall (here "experts" disagree). A communicating cupboard between dining room and kitchen, a "passway cupboard," will save about 50 per cent of usual carrying steps, and it is a convenient and efficient time-and-effort-saver.



The table is set from the dining room side, prepared food then placed in cupboard and served from dining room side, with no trotting to kitchen. The meal over, dishes are stacked in the cupboard, then washed and replaced on shelves on the kitchen side without taking a step



The passway cupboard may have any treatment desired—flush doors divided at the countertop height (left), or with a projecting sideboard (see Dining Room page)

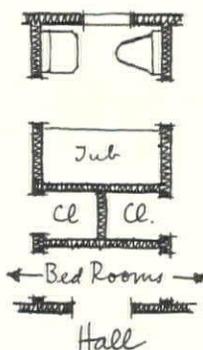


Let upper kitchen cabinet doors project down 3/4", as shown. Fingers grip underneath, and no handles are needed. Friction catches will keep the doors closed

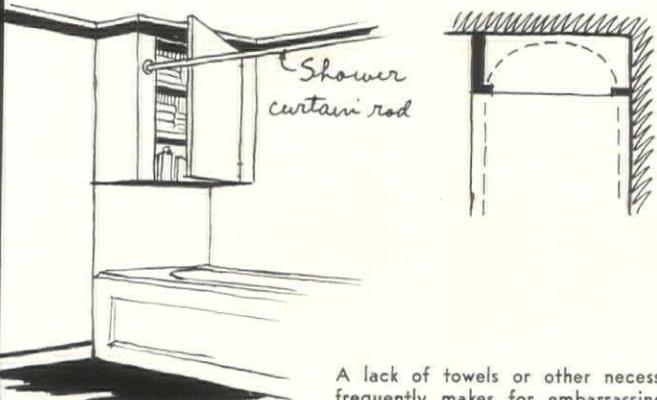
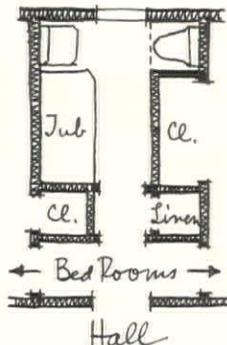
THE BATHROOM

THE bathroom has received so much study that it is probably the best planned and equipped room in the house. In new work, it is axiomatic that the least expensive and most satisfactory bath has all three fixtures on the same wall. A bathroom between two bedrooms, with a door to each, leaves much to be desired when one person leaves the bath without unlocking the other door. A solution is suggested in the plans at the right. A shower bath is desirable in at least one bathroom, if not in all. It is often possible to fit in a shower where a tub would lead to difficulties of shape, and in remodeling work it is sometimes the only solution possible. Much can be done with the color scheme, with materials which will create a distinguished effect at small expense, and with more spacious cabinets.

BATH BETWEEN TWO BEDROOMS

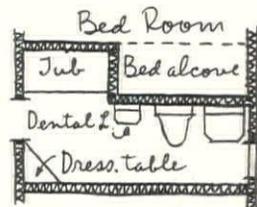


At the left is a usual plan for a bathroom with communicating doors between two bedrooms. The "locked door nuisance" is rectified in the plan to the right by having only one door. While the latter plan uses slightly more floor area, there is greater wall space in the left bedroom, an added linen closet, a larger closet in the right bedroom, and a roomier bathroom itself. Day or dinner guests can enter bathroom without invading a bedroom, where children may be asleep

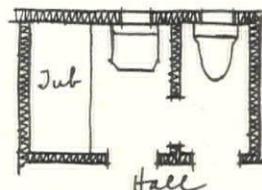


A lack of towels or other necessities frequently makes for embarrassing or ludicrous bathroom episodes. A cabinet with 9" or 10" shelves over the foot of the tub is convenient and out of the way, because the tub's sloping end prevents standing upright there. Large bottles could be accommodated in this over-tub cabinet also

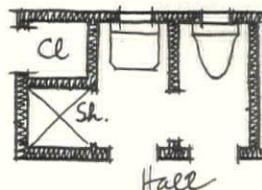
A bedroom can be small and yet apparently spacious if the bed is in an alcove, and the bathroom can profit by a recessed tub. A dental lavatory can be introduced without much expense if placed as shown



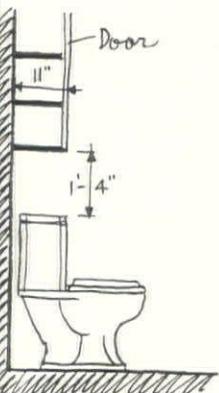
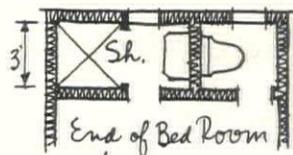
There is something in favor of the English practice of placing the w.c. in a separate compartment. In the small house with only one bathroom this is particularly advantageous during the morning rush



Another suggestion—a shower is substituted for the tub, a closet gained. Instead of merely a shower stall, a short type tub can be installed, plus a shower fixture. The door between compartments is optional, of course

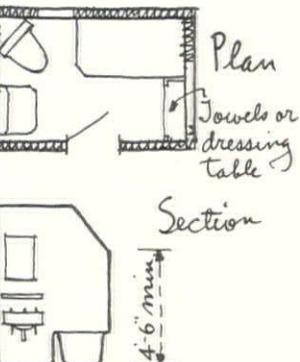
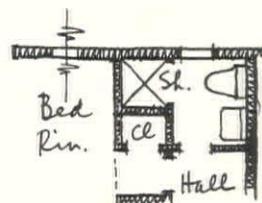


Sometimes in remodeling (or in a master's bedroom) 3' or 3'-6" at the room's end can be used for a compact bathroom as shown here. The floor area is no greater than the usual 5 by 7 bathroom, yet the shape may provide for a better rectangular bedroom



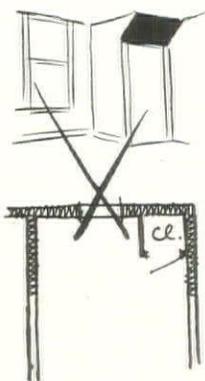
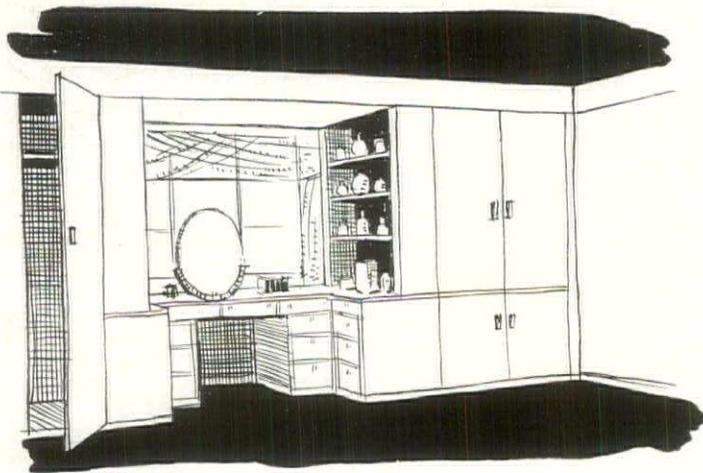
A shallow cabinet over the water closet in the small wash room (first floor lavatory) is indispensable for towels and toilet supplies. In a household where there are young children or young ladies such an auxiliary cabinet will be much appreciated

The efficiency of a bedroom depends largely upon wall space and door arrangement. With a compact bath as shown, the closet squares out the shower, and the bedroom needing only one door preserves its wall space

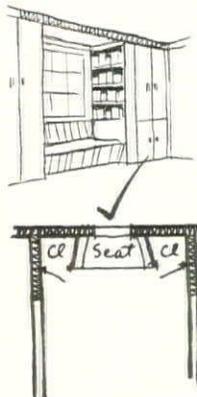


Where there is a choice, it is better to tuck a bathroom under the sloping ceiling than to make a bedroom suffer from low headroom. The tub can be under the low portion, and the w.c. in the corner at 45 degrees. Only the lavatory and mirror need full headroom, as shown in the section. The sketch plan allows for windows on any of the walls except the one with the door

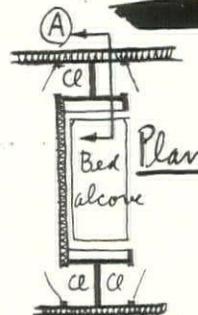
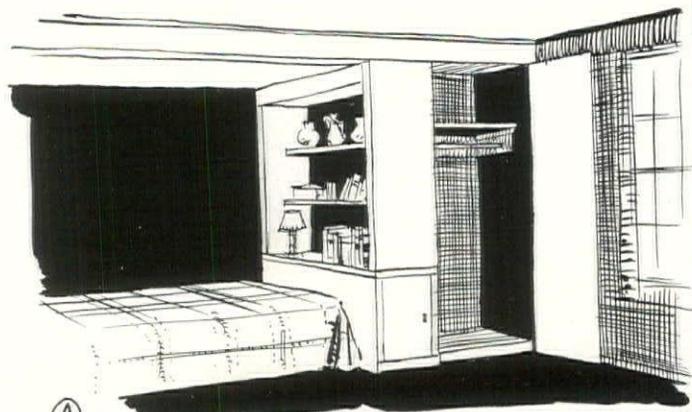
THE BEDROOMS



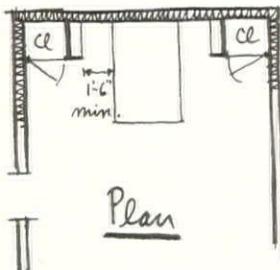
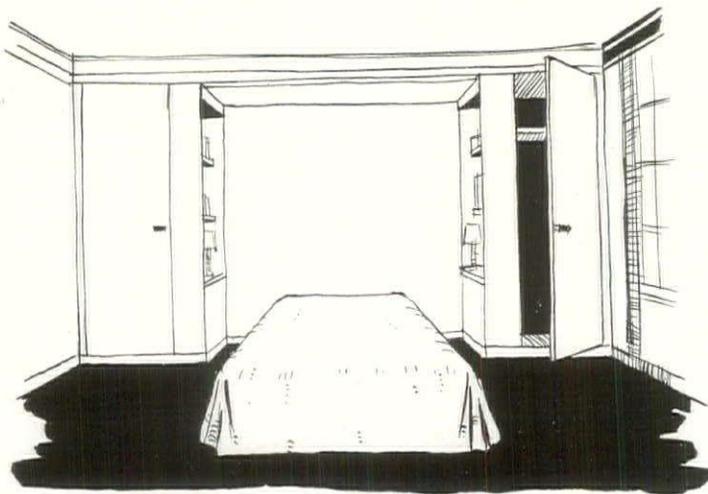
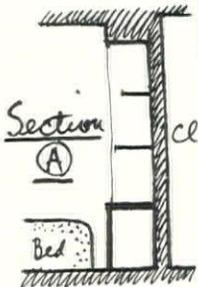
Houses suffering from what is thought to be the "Dutch Colonial" style frequently have a corner of a bedroom nicked out by the roof with a closet as shown to the left. Two solutions are shown, both having the entire end of the room with built-in closets and cupboards: one has a dressing table in front of the window, the other a window seat. It is both useful and decorative to have shelves on the jamb side of closets



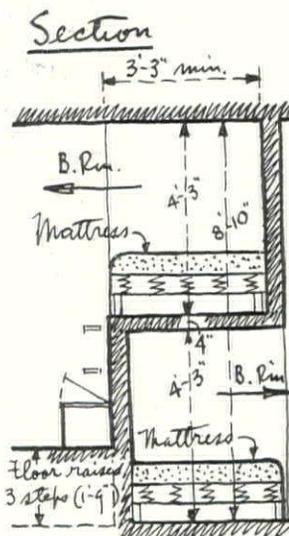
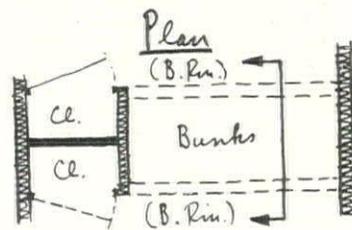
THE bedroom has been neglected. Yet there is a great field for improvement in rooms used chiefly for sleeping to make them useful also for play, study and sitting rooms. The placing of doors and windows must be considered in relation to cross-drafts. Plan the room so that the floor area unoccupied by the bed is something more than a corridor connecting hall door with bath and closet doors. A bedroom is not to be reckoned merely in the gross area, but solely in the net usable area after the bed has been located and travel routes established. For example, if in a room 10' by 12' the beds can be at the same end as the doors, leaving the remainder of the room as a sitting room, it will accomplish more than a room 18' by 12' which has the beds in the center of the long wall, and the doors in opposite corners.



Where closets must project into the room, an alcove for the head of the bed may solve the problem. There should be at least 1'-6" clearance between the sides of the bed and closets, making the alcove long enough to put a single bed parallel to the wall if desired. The side shelves are useful for lamps, books and decorative gadgets



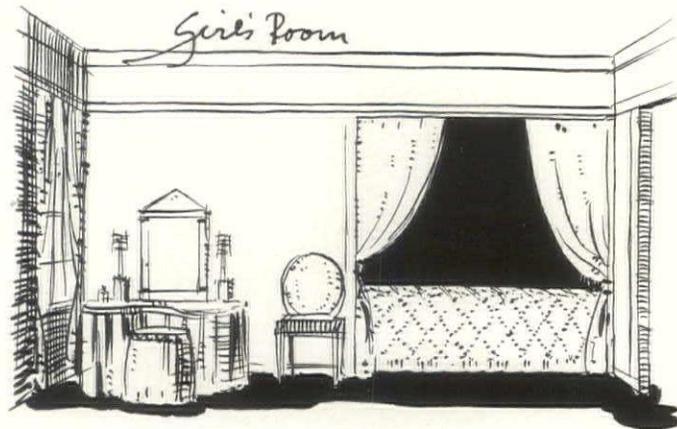
The bed in an alcove flanked by closets makes a small room seem larger because nothing breaks into the regular rectangular floor area. Clearance at the ends of the bed has a housekeeping advantage. The bed edge should be back of closet-face so hangings can be hung behind the furred-down beam



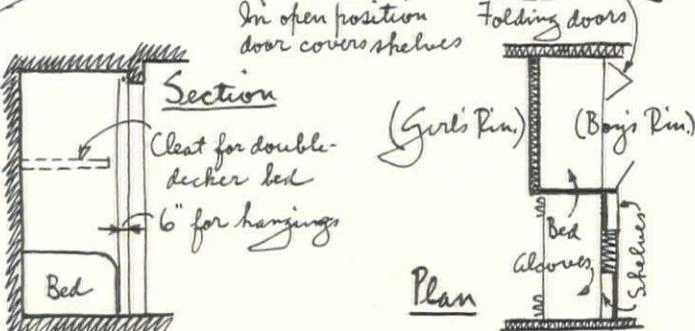
For bare minimum bedrooms, such as separate bedrooms for boy and girl, or a summer camp, the double-decker bunk idea may work. The lower bunk faces one room, the upper opening into the other room. For the latter it would be well if the floor could be raised perhaps 3 steps, and a high, continuous step with a hinged top placed as shown

THE BEDROOMS

It is to be hoped that the realization soon will dawn that a large room, with one closet, is virtually smaller in usefulness than a smaller room with two closets and built-in cupboards. The room with insufficient closet space requires that furniture be made to compensate for this deficiency. Yet any child knows the relative volume of a large chest of drawers and a small linen closet having shelves going up to the eye level. Built-in cupboards up to the window stool level will not only serve as furniture, but will stow away as much as several pieces of movable furniture. And they can be inexpensively made by any carpenter. It is not unlikely that the house-buying public will be more sober-minded and critical these days. The new buying public may do the architect a good turn by demanding that bedrooms be efficient and in good taste.

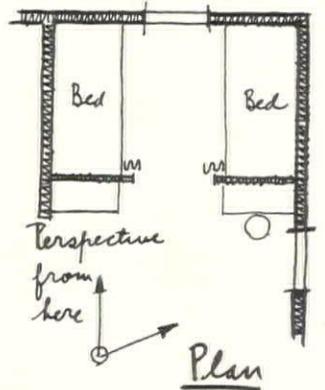


If bedrooms have a common wall 13' to 14' long there can be alcoves for beds (see plans below). Their character can range from delicate Louis XV to the sophisticated modern. In either, the bed can be hidden, and a room only 8' wide will seem commodious because no bed projects



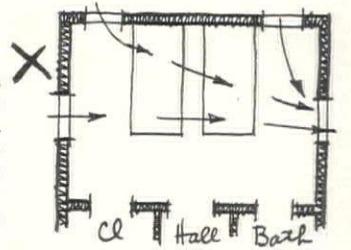
Folding doors in three sections can be used to close the alcove opening. In being open the one unit covers bookshelves, while the other two fold against the side wall. The cleats for a second bed or bunk, would be useful in a summer or weekend cottage

When children reach the age when they must use the living room for entertaining, the parents' bedroom must serve as an "old folks' " sitting room. One solution is to place the beds behind a part-partition and hangings. A mirror on the sitting room side increases the apparent room size, as well as being useful for a dressing table. In any case this scheme would be appreciated by any two persons who go to bed at different hours, when illumination would otherwise disturb the sleeper

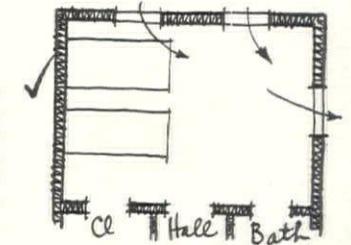


COMPARATIVE PLANS

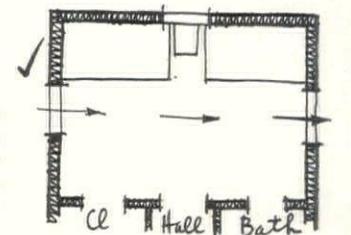
The subject of placing windows and doors should be carefully considered in relation to cross-drafts when windows are opened. While this plan is obviously full of mistakes, it is repeated countless times. There is no room for comfortable furniture, in fact, there is scarcely room for chairs



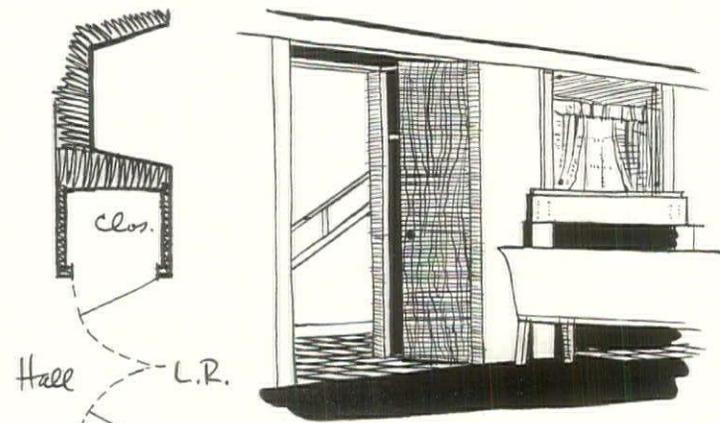
The doors are the same as in the plan above, the room is made wide enough to place the beds at one end with space to open the closet door. There are now no direct drafts, and the large right end is available for furniture arrangements



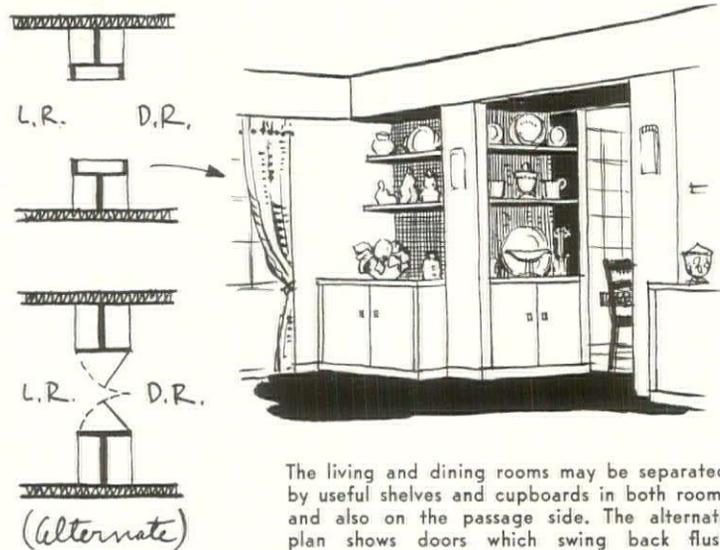
Again the same door arrangement, but the room is made long enough to have beds placed end to end, with a small table between them. Drafts or air-flow can be regulated to suit the sleepers by opening the proper windows



CLOSETS AND SHELVING



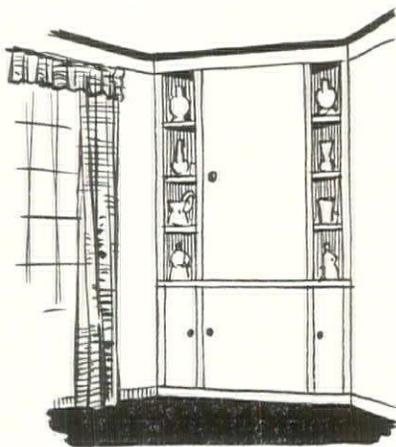
A logical pair of coat closets is shown, and the wall of the living room is brought out flush with the mantel. In addition, the doors may also serve to close the cased opening on cold nights when the first floor heat is inclined to escape to the second floor



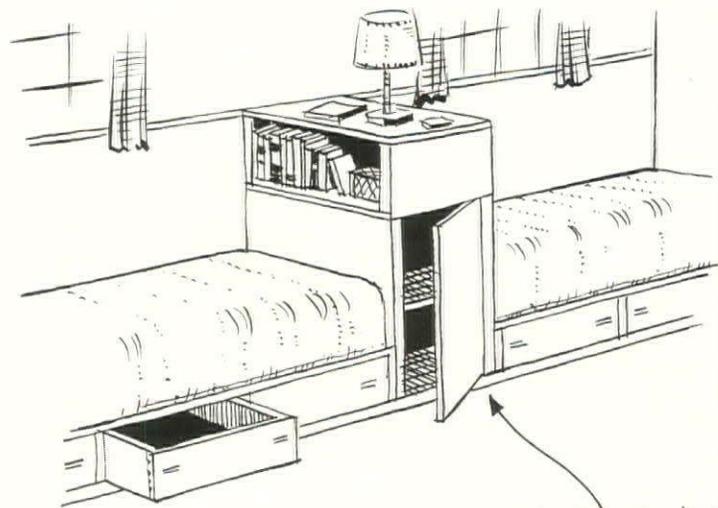
The living and dining rooms may be separated by useful shelves and cupboards in both rooms and also on the passage side. The alternate plan shows doors which swing back flush when open, not interfering with any furniture



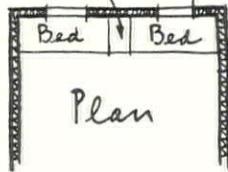
The solid door in the center, with the narrow triangular portion of each shelf exposed at the sides, can be a colorful solution to the corner cupboard problem. Good colors for the backs of the open shelves are robin's egg blue, faded vermilion and cerulean blue



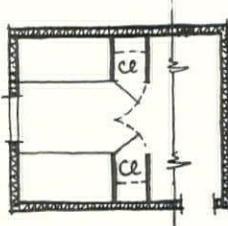
If the architect is to inject the well-known "sales appeal" into his small houses, the matter of closets and cupboards is worth all the time involved. It will not be an item of great expense if plywood is used in a simple manner, free from senseless offsets and mouldings. Useful and unexpected versions of closets and shelving are the housewife's joy. Somehow the use of color on the backs and sides of shelves has been neglected, yet it will do more to enliven the result than capering curves on aprons and side members. Raising the floor of a closet a few inches will lessen the amount of dust which would otherwise get in under the door. "Two closets per bed" is a good rule. A coat closet near the front door is always a necessity—yet most houses are without one.



Ugly old bedsteads can be discarded if a row of drawers is built on the floor so that the springs of the beds can fit above them. The bedroom will be surprisingly roomy if one side is arranged as shown. This is a practical solution for the long and narrow bedroom



Ample sleeping and storage accommodations are created by putting a closet at the foot of each bed. The doors can be swung to close off this sleeping compartment. This sleeping area can open either on a small sitting room, another bedroom, or adjoining a rather small combination boudoir - dressing room



Shelving built above a low cupboard can often be made more attractive and useful if the vertical spacing of the shelves not only decreases as it goes up, but if the shelves recede as they go higher. In living, dining or bedroom, there are generally certain books or decorative objects which are less high and deep than others, and which look lost on high, deep shelves. If the cupboard projects beyond the lowest shelf, there will be a convenient place for a lamp.



CLINICS FOR CLIENTS

BY HARVEY STEVENSON

THOSE who rely on building for the returns on their investments are generally conscious today of the value of good architectural service. The lending institutions realize that many of the buildings on their hands are practically useless because of bad design. The manufacturers, many of whom have advanced money as well, realize that the use of their material alone does not insure a satisfactory job. Their materials must be guarded when the decisions are almost entirely up to the builder, who is naturally trying to make the maximum profit out of the operation. Neither the lending institutions nor the Government agencies, for that matter, assert that their supervisory service supplants that of the architect, nor are the commercial interests blind to the value of beauty.

The general public, however, is still ignorant of what an architect does and why he is essential. The individual architect cannot alter this. The public in the low-income group is reached largely through the channels of publicity. The lending institutions and the manufacturers are the ones to utilize these channels. If the former want better loans and the latter want their products used to better advantage they must tell the public what they want the public to appreciate.

Assuming that the public is told, and told convincingly,—how, then, can this public be furnished with the service it should have? The usual \$4,000 house will not (at least not yet) carry a \$400—or even a \$300—architectural fee. On the other hand \$400 will hardly pay for the service the first-class architect is accustomed to give. It is obvious, therefore, that the service can be furnished only by a group and by clinical arrangement. It is bromidic to refer to the medical profession, but the plain fact remains that the doctors have met this problem with an intelligent solution while the architects up to now have neglected it.

The program of Small House Associates of New York may be illustrative of the search for an answer. This group consists of established members of the A. I. A. who, having scratched their heads, have dug into their pockets. They have service, not plans, to sell. This service, moreover, is definitely limited to the essentials so that there is no competition with established professional practice, where such practice in this field is fortunate enough to exist. This limited service is applicable to houses costing from \$3,500 to \$8,000. The group maintains an office with a competent person in charge. In this office are displayed sketches of small houses already designed for this purpose—because it is established that people have to “see what they want.”

When the potential home builder, usually referred to the group by a lending institution or a manufacturer, goes to the office he is permitted to look over the exhibits and asked to fill out a preliminary form which has been worked out with the Loan Associations. The information required

Doctors have done it. Now groups of Architects insure healthier buildings and building investments with better supervision and better plans for low cost houses.

for credit reference, etc., parallels that of the local Building and Loan group and can be readily exchanged with them. Arrangements have been made with them, too, for tentative approval of sites before proceeding with the plans. The issuance of certificates for payment to the contractor, moreover, is co-ordinated with the installments of the building loan.

If, then, Mr. B. finds one of the group exhibits to his liking he is referred, after giving what routine information the architect would otherwise have to discover, to the architect who designed that sketch. If Mr. B. has brought his own sketch plan, he may have that followed, provided it is not the property of someone else, and it will become the property of the group. From that point on Mr. B. deals with an individual architect.

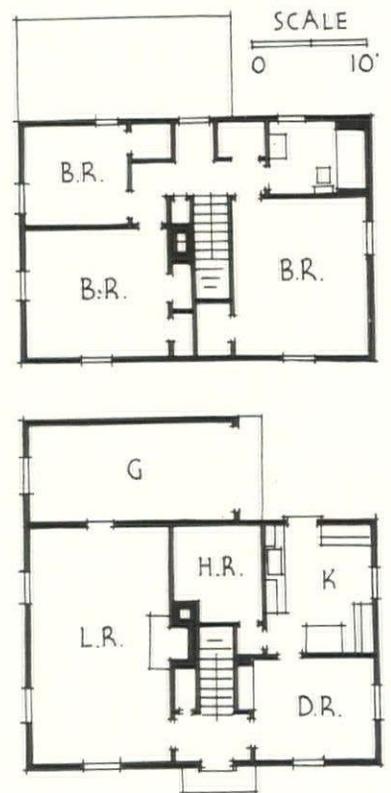
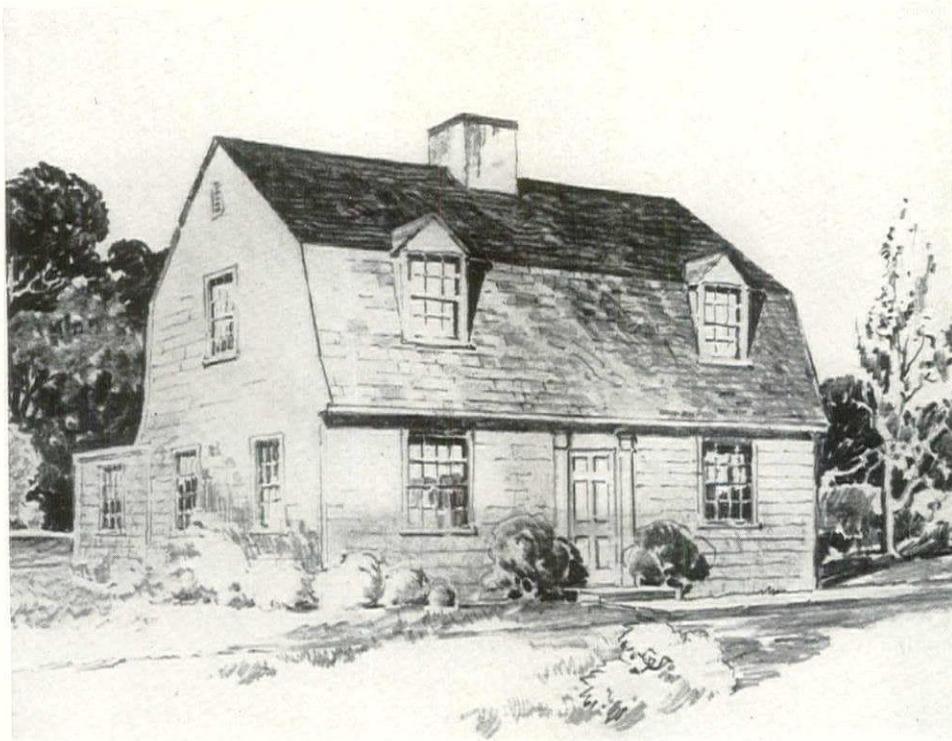
The limitations of service are primarily in the number of conferences he may have with the architect and in the number of changes, which are permissible only before the working drawings are begun, from the basic sketch. These and the inspections of the job are all defined beforehand. One competent inspector from the central office can handle all the inspections in a given area. Other time-savers exist in the standardization of specifications and of many details. All the drawings, of course, remain the property of the architect and may be re-used.

Running expenses of the group are divided equally, but the costs of preparing, mounting, photostating, and estimating each design are chargeable to the individual architect, who may prepare as many as he wishes, subject to the approval of the Design Committee. It is the function also of this Committee to strive continuously toward perfecting these designs, for it is no easy matter to maintain a library of plans which shall be appreciably better than those already obtainable from non-professional sources—or as good as many in the files of other architectural service bureaus. But the designs should continue to be improved and careful note should be made of the reaction of each prospective builder to each detail.

In spite of the general and enthusiastic approval of this movement from the officials of the Institute, banks, building and loan associations, manufacturing companies, material supply companies, magazines, and advertising agencies, its proponents do not expect it to revolutionize the building industry immediately—nor even to begin to pay its cost in cash. It has already been proved useful, however, in providing a place where someone with no other source of information may find a reliable architect for whatever purpose. But, in the larger sense, if it does no more than provide intelligent and unbiased information to the home-seeker, if it does no more than provide a vital course in educating the public in the architect's function and ideals, it will have served its purpose. To sidestep issues such as this seems not consistent with the profession's broadest vision.

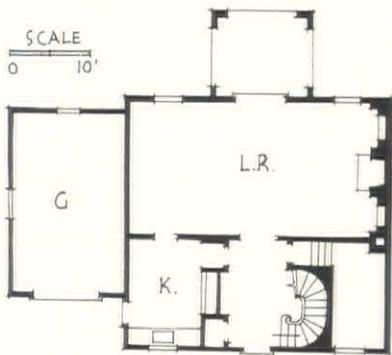
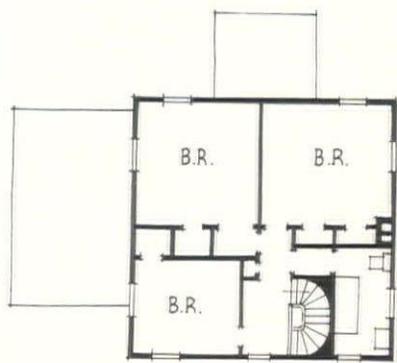


An unusually distinguished façade for what is essentially a minimum house. Designed for the narrow, deep lot it is an excellent example of spaciousness arrived at by a separation of the living and service quarters

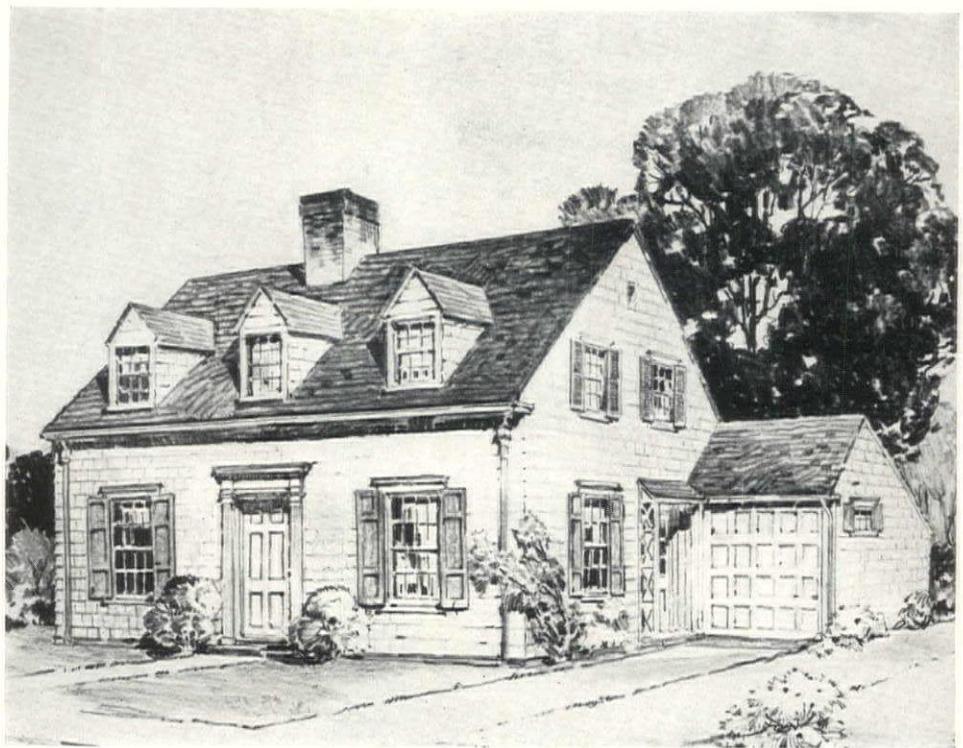
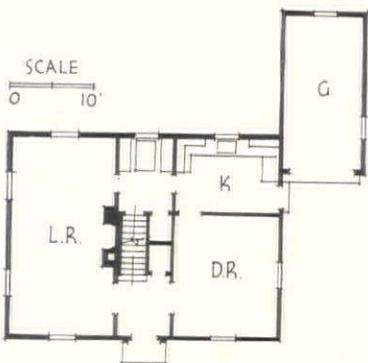
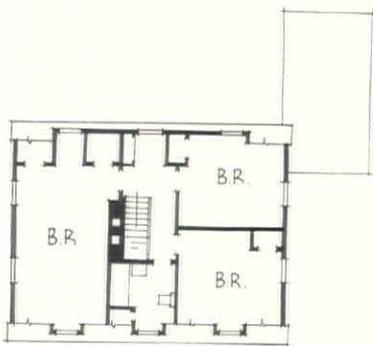


The Cape Cod type house remains perennially popular because of its simplicity of architectural treatment, symmetrical façade and a convenient arrangement of rooms planned around the central chimney

FOUR HOUSE DESIGNS FROM MANY EVOLVED BY SMALL HOUSE



Another neo-classic small house treatment. The vista developed by the through axis from front to rear entrance gives a sense of graciousness. The location of the hall entrance to the kitchen is good



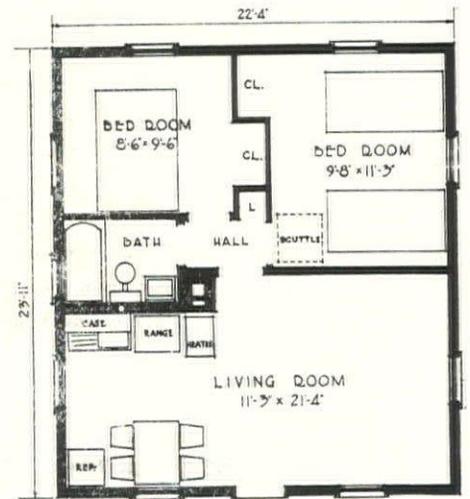
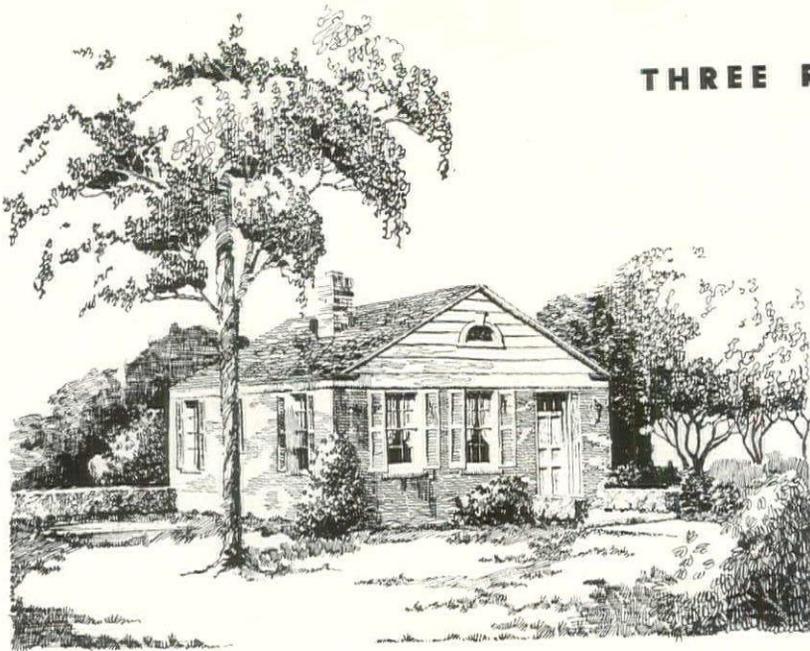
The door and window treatment makes this a more elaborate colonial type house. The first floor plan, around a central chimney, is especially well studied for traffic between all rooms

ASSOCIATES, NEW YORK'S NEW ARCHITECTURAL CLINIC

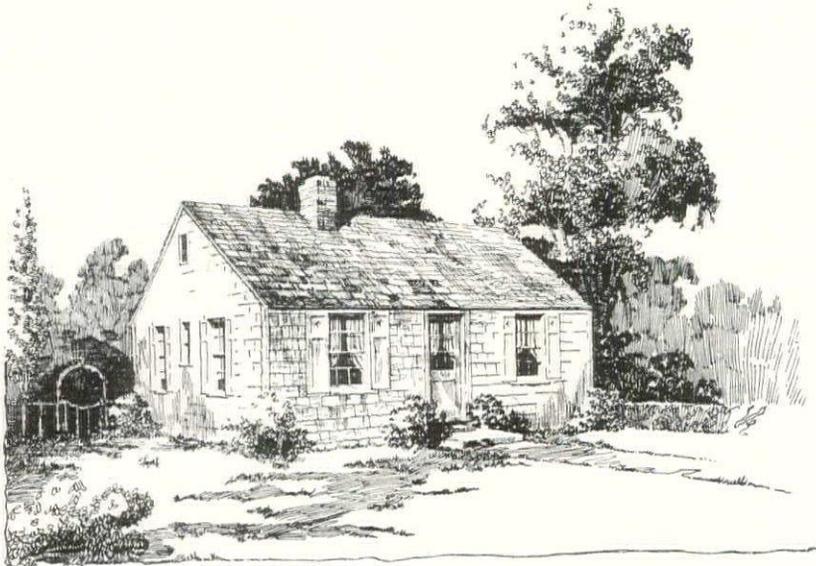
FHA'S LOW-COST HOUSING STUDIES

DU^E to public interest in the building of dwellings in the lower price brackets, the Federal Housing Administration has recently released Technical Bulletin No. 4, titled "Principles of Planning Small Houses." While FHA seeks to encourage greater production of such houses, it has no intention of furnishing stock plans for general use. It has also sought to avoid standardization which is threatened by the use of such plans on a national scale. In emphasizing the importance of localization of its own minimum standards, and through the encouragement of the use of architectural services, it has hoped to disseminate interest in individual construction of the better small house. Besides a discussion of better building, Bulletin No. 4 contains a number of illustrative cases, which include perspective renderings of various façade treatments and plans for minimum houses of both one and two stories.

THREE ROOMS AND BATH

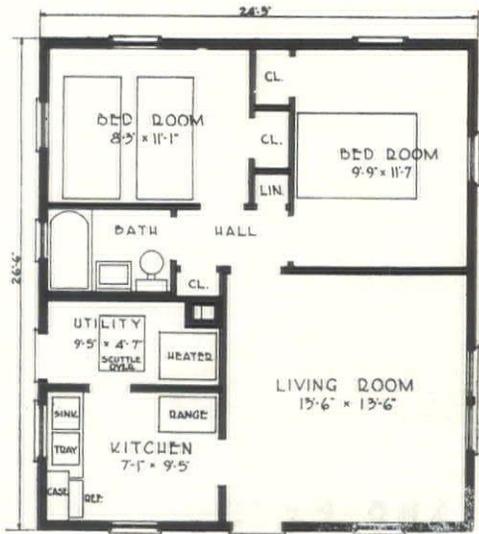


FIRST FLOOR

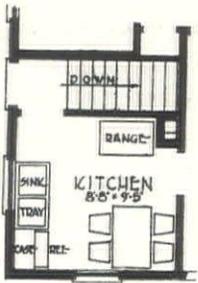
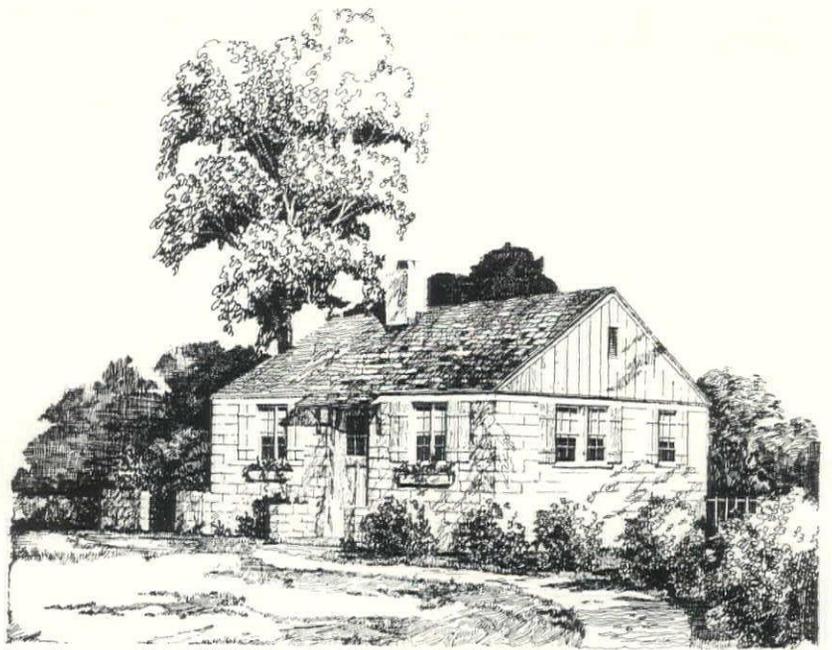


Plan and perspectives of a minimum house for a family of four. Standard of amenity, while not high, has all essential elements of a better house. In designing these houses, the following standards were used: Rectangular perimeter avoiding all breaks except at the corners; interior framing and partitioning eliminates all possible corners; standard lengths of lumber used throughout, except where cutting is required to form gables or frame stairs and chimneys; joists between outside bearing walls and supported by bearing members to reduce cutting and give greater flexibility in interior planning; stock millwork; concentrated plumbing lines and efficient heating layouts

FOUR ROOMS AND BATH

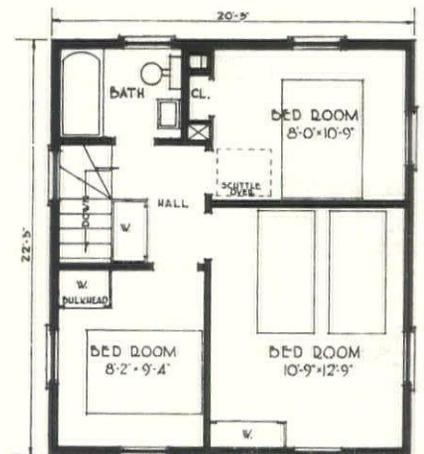
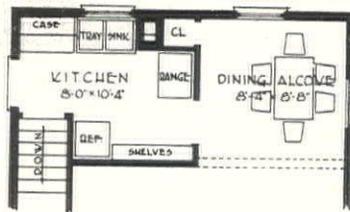
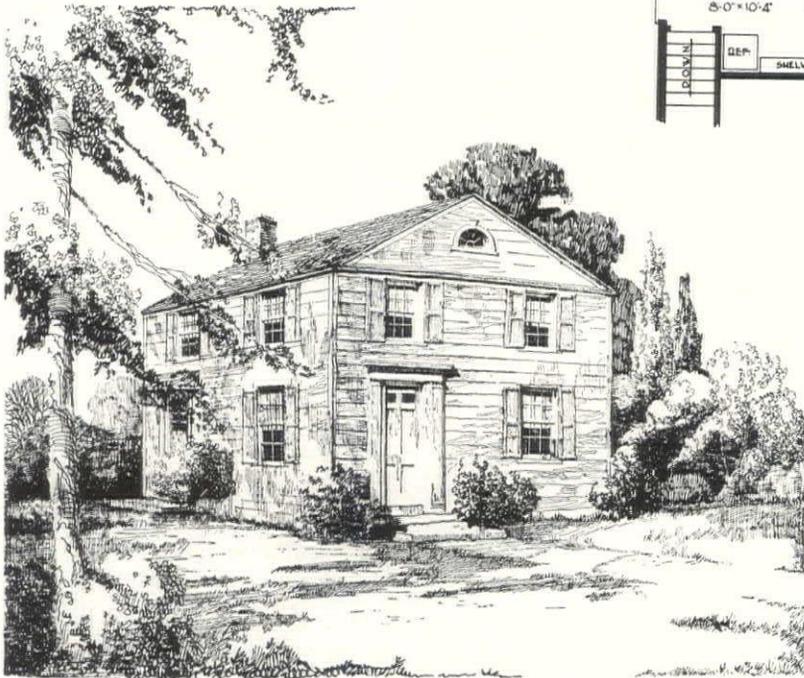


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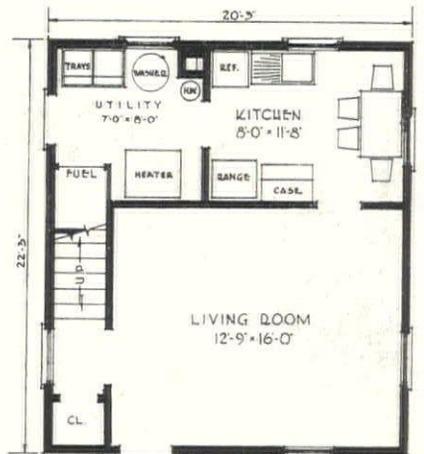


(Above and left): Plans and perspective of another minimum one-story house. Living room separated from kitchen by partition. The alternate plan of the kitchen shows how it might be treated if a basement were used with this plan. . . (Below and right): This house offers relatively the same accommodations as the one-story type, except that, in this case, the house is two stories, and has an additional bedroom. The alternate kitchen plan illustrates how a dining alcove could be obtained if this house had a basement

FIVE ROOMS AND BATH

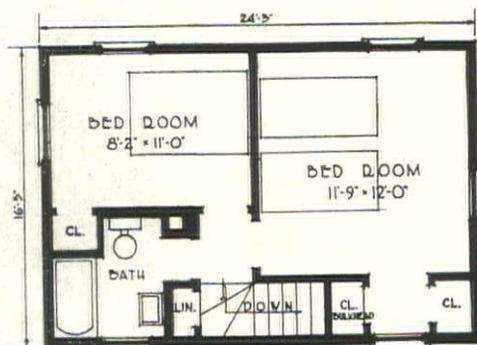
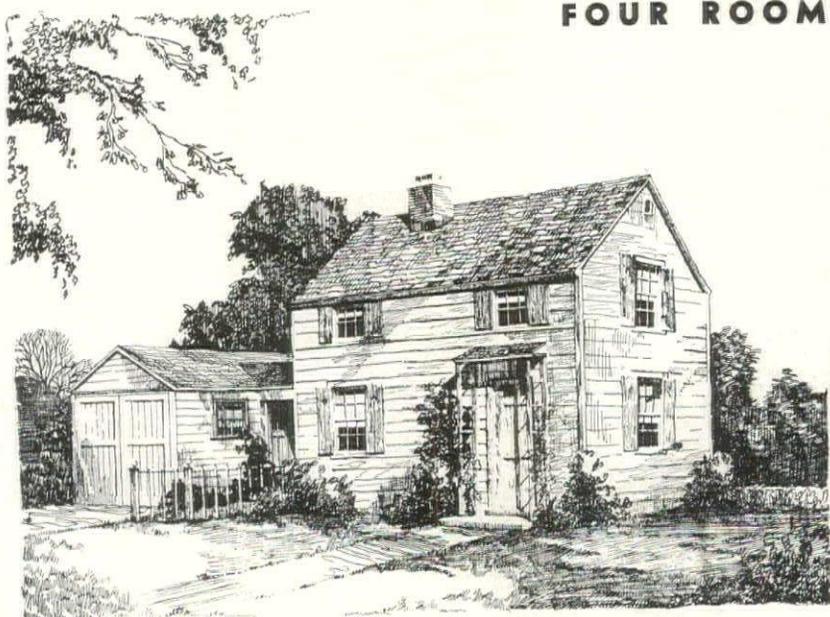


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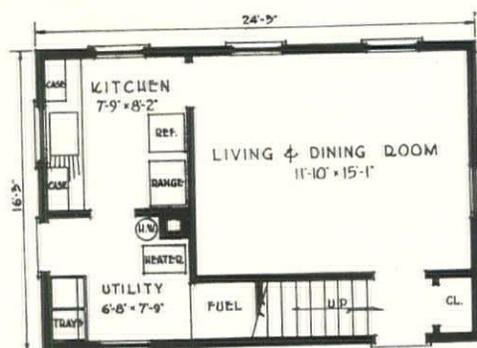


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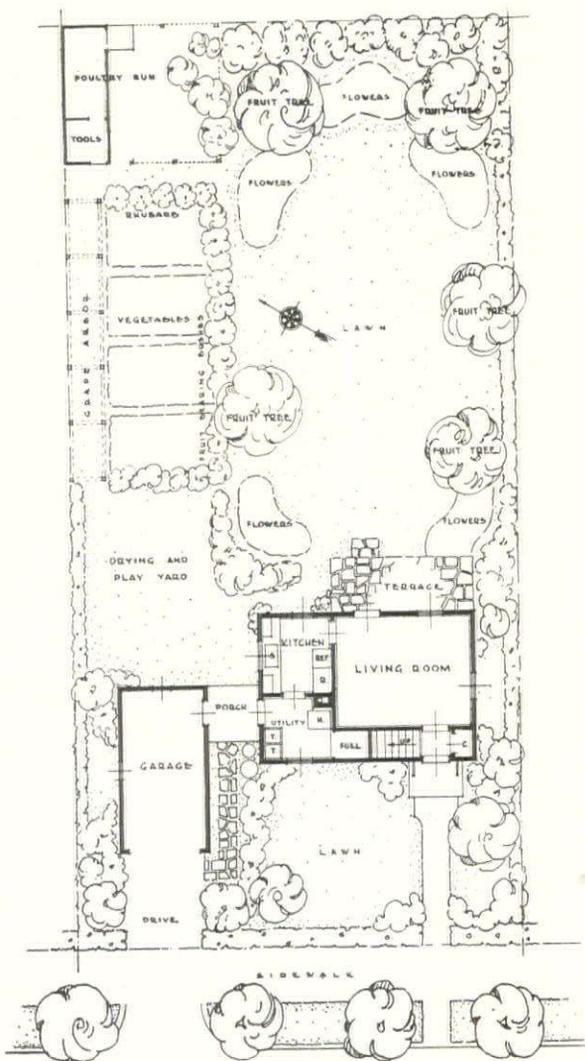
FOUR ROOMS AND BATH



SECOND FLOOR



FIRST FLOOR



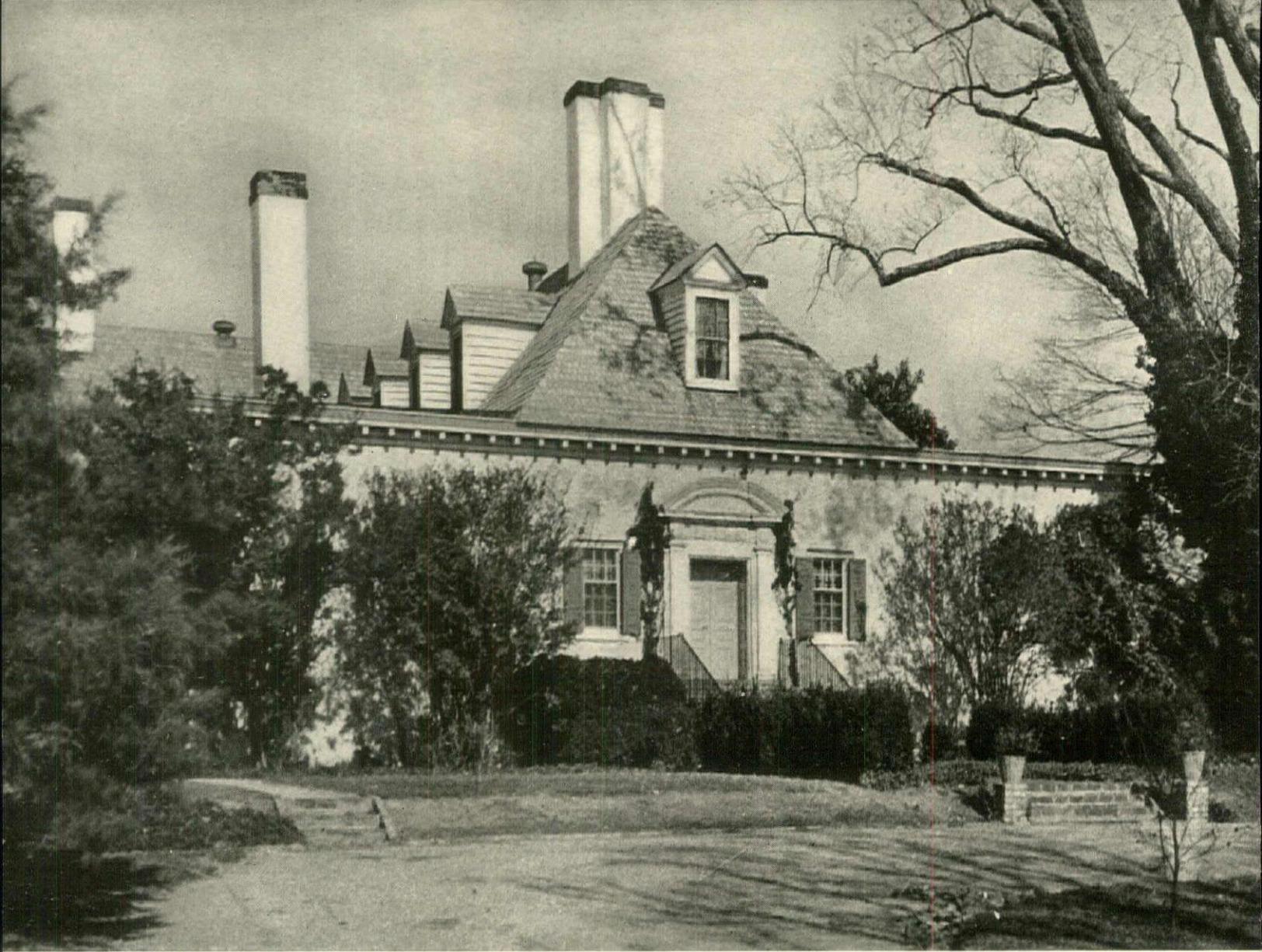
Study of a two-story house, with two bedrooms, illustrates location of a garage, and includes alternate kitchen treatment if a basement is needed. Walls have been designed generally for 14-foot stud using balloon frame; floor framing back of the stairs uses 12-foot floor joists bearing on a center partition and framing around the stairway. Plumbing permits one soil stack. Heater room is large enough to accommodate laundry trays. Cross-ventilation for the low ceiling second story rooms obtained by means of casement sash designed to swing outward on hinges located at the top. . . All of houses illustrated are suitable to a wide range of location including building lots in the average city suburbs, and on tracts large enough to provide subsistence gardens. The plot layout illustrated indicates the attractive way in which a lot 50 feet wide and 120 feet long may be developed.



PHOTO: COOK STUDIOS

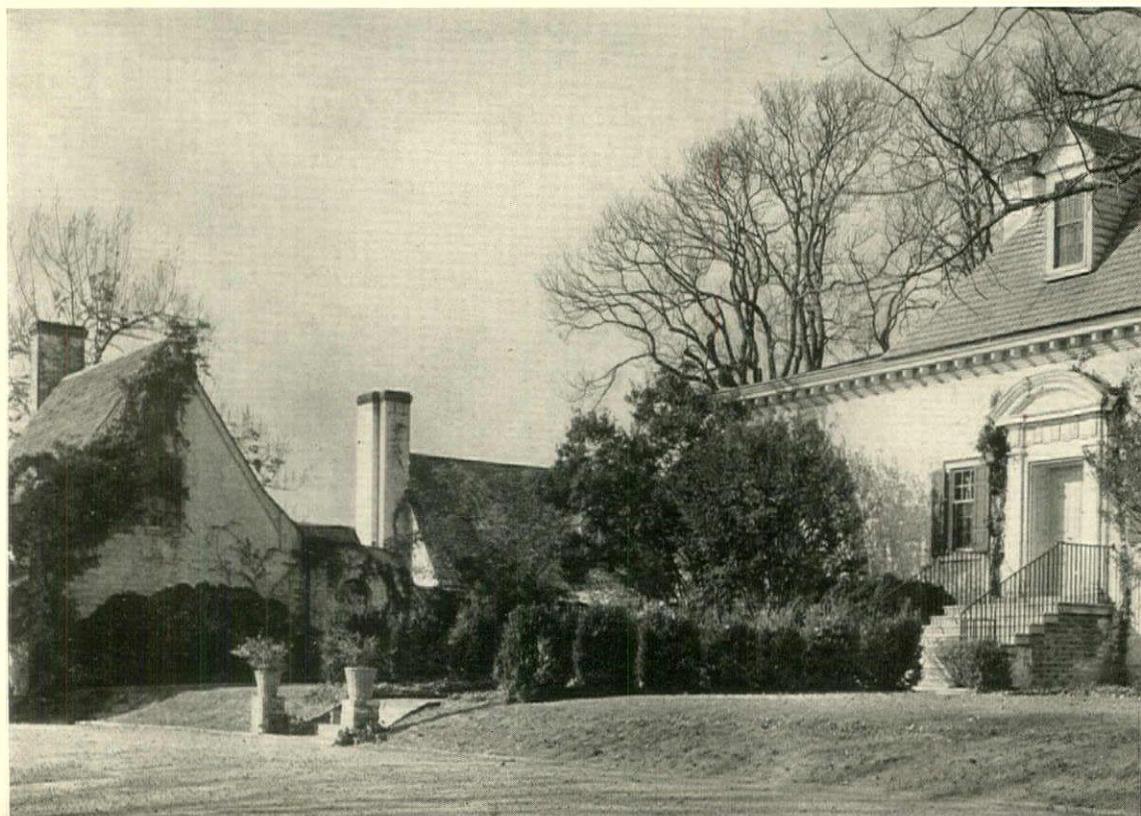
OLD VIRGINIA HOUSES

FROM the time of the arrival of the first colonists at Jamestown in 1607, the history of the Tidewater has been a long, colorful and romantic pageant. The many records of the charm, culture and hospitality of its people are substantiated by the relics of its splendid architecture. The restoration of Williamsburg and of many isolated great houses, and an improved state road system have aroused public interest in this important section of our country. WESTOVER, in Charles City County, has probably served as design inspiration more often than any other single example of Georgian architecture in America. Built by William Byrd II in 1726 it is beautifully situated amid broad lawns and fine old trees on the north bank of the James River.



PHOTOS: EDWARD PIERPONT BECKWITH

CLAREMONT, in Surry County, is one of the oldest important houses in Virginia. The exact date of its building is unknown. Part of an original estate of 1200 acres, patented in 1649 by Arthur Allen, (a member of the House of Hanover), it was acquired in 1928 by General William H. Coker. William Lawrence Bottomley, Architect, was in charge of the restoration.



CARTER'S GROVE, in James City County, remains the only great house in the immediate vicinity of Williamsburg. Built by Carter Burwell, in 1751, it was designed by David Minitree, an English master mason, who also supervised its construction. It was acquired by Mr. and Mrs. Archibald McCrea in 1927 and restored under the supervision of W. Duncan Lee, Architect.



PHOTOS: ROBERT W. TEBBS



BLANDFIELD, in Essex County, a little known Virginia house, has been subject to unfortunate changes. Built by Colonel William Beverley in 1760-70 it was remodeled in the neo-classic style in 1854. A porch was added and all of the fine old Georgian woodwork, except the exterior cornices and the interior trim in the dependencies, was removed.



PHOTO: LAYTON STUDIOS





PHOTO: EDWARD PIERPONT BECKWITH



UPPER BRANDON, in Prince George County, was so named to distinguish it from the older plantation at Brandon. Built during the early part of the 19th Century by William Byrd Harrison, a grandson of the builder of Brandon, it recalls the typical Georgian plan in its relation of main house to flanking two-story dependencies.



PHOTO: ALBERT S. BURNS FOR HISTORIC AMERICAN BUILDING SURVEYS

OAK HILL, in Dinwiddie County. Its simple classic grace and charm is reminiscent of plantation houses in the deep south and some of the fine Greek revival houses in Central New York.

PHOTO: VIRGINIA STATE CHAMBER OF COMMERCE



SHIRLEY, in Charles City County, is interesting in its square plan and in the treatment of roof and dormers. Built by John Carter, the eldest son of Robert (King) Carter, it was the birthplace of Anne Hill Carter, wife of "Light Horse" Harry Lee and mother of General Robert E. Lee.

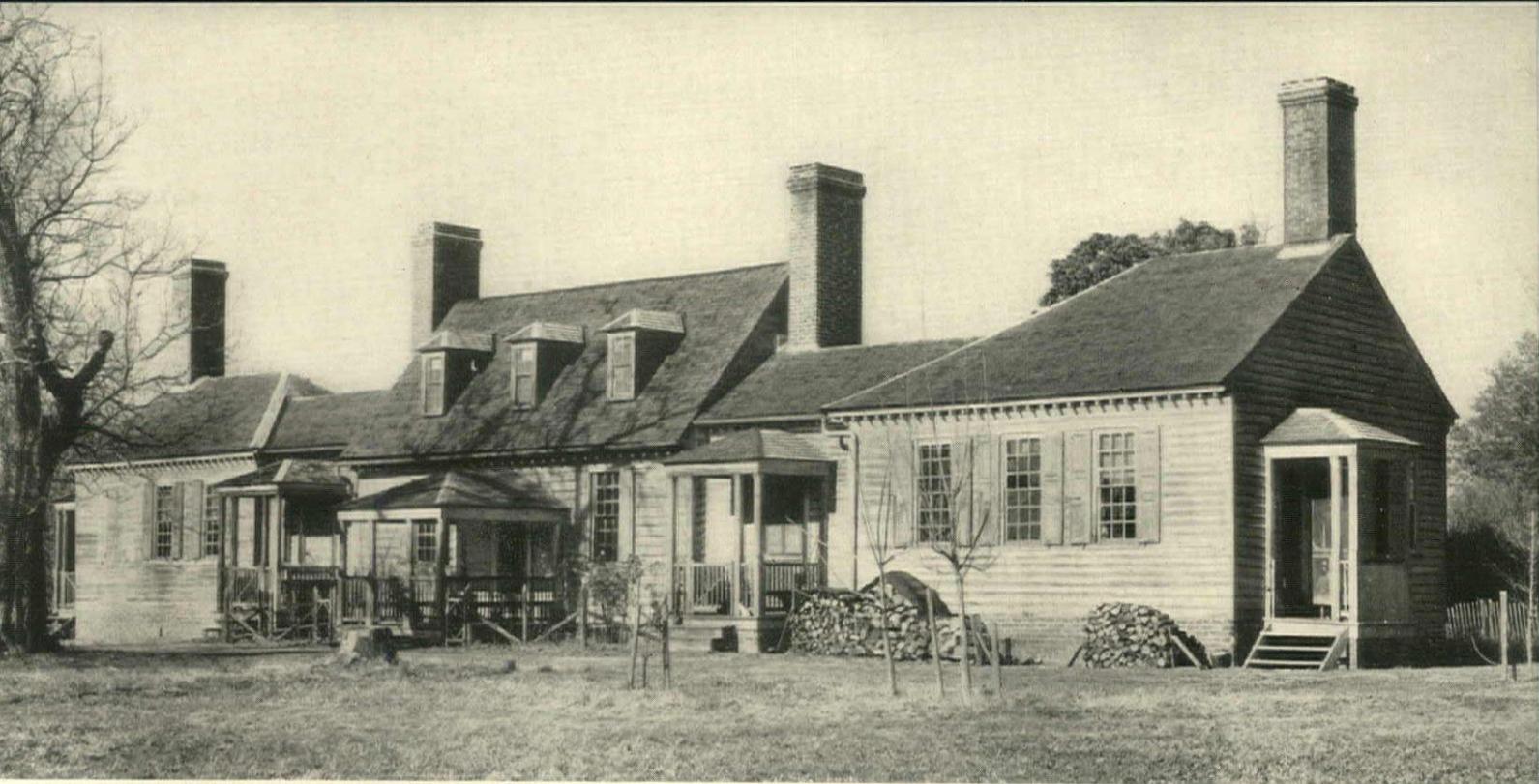


PHOTO: ALBERT S. BURNS FOR HISTORIC AMERICAN BUILDING SURVEYS

WALES, in Chesterfield County, is an unusual example of the smaller plantation building. The symmetrical wings take on an interesting character due to the unique roof treatment.

PHOTO: VIRGINIA STATE CHAMBER OF COMMERCE



BREMO, in Fluvanna County, bears the characteristic stamp of Thomas Jefferson's genius in the quality of its fine brick work and the classic proportions of its porticos. Brick columns have a light stucco finish. It was built by General John Hartwell Cocke in 1819.



PHOTO: VIRGINIA STATE CHAMBER OF COMMERCE

TUCKAHOE, in Goochland County, has an H plan which is to be found in only one other Virginian great house, Stratford. The exact date of the building of Tuckahoe is unknown, although it probably was built prior to 1700 either by or for Thomas Randolph.

DEALING IN FUTURES

THE CONVENTION of the A.I.A. will have dealt with the problem of futures, will have enjoyed Williamsburg and the hospitality of Virginia and the College of William and Mary, and the delegates will have departed from the scene before this issue is published. The delegates will have a new sense of the meaning of the architecture of a glorious past, will be impressed by the earnest faithfulness of their elected officials and will have received new inspiration for the solution of the problems the profession continually faces. The problems will have been more clearly outlined. They will be faced with renewed faith and hope—faith in the abilities of the architect, and hope that future economic and political conditions will suffer the profession to exercise its abilities once more.

¶ The cheerful note that “things are picking up,” more sketches are being made, more jobs are going ahead, will be heartening. Statistics will be quoted, and the current interest in the small house is a hopeful sign. The statistics demonstrate the need for new dwellings, a fact so well-known that it needs no demonstration. But potential demand can only become effective demand when the incomes of the potential renters, buyers or builders increase, and it is only effective demand that can make the drafting rooms hum. It is unfortunate that the large market for the \$5,000-and-under house cannot be served by the present methods of architectural practice. The improvement in the design of small houses will come from the use builders make of the designs which architects have produced and which are published in the consumer and trade magazines. The public demands so little in its small houses in the way of efficient planning for use and proper orientation, and so much in the way of style, labor-saving and comfort-producing that we may expect the present trend of speculative building to continue its imitative stylistic course.

¶ Undoubtedly, the ideas of the “clinic for clients” will have been discussed at the Convention, and some improvement in plan and design of small houses will result. The architect’s contribution to small house architecture may continue, however, to be just that—a contribution—a series of samples for local builders to copy.

¶ The supervision which small houses should have will probably be limited to the minimum supervision demanded by the lenders or by the insurers of the mortgage. The quality of much of the equipment will be assured by the fact that manufacturers are establishing standards through their trade-marked goods which have become selling features in the field. The possibility of better integrated and organized uses of products may lead to the establishment of “certified houses” or houses bearing marks of the approval of a group or groups of manufacturers and professionals.

¶ One idea for a better house “clinic,” which would more closely resemble the medical clinics, would be to establish through each A.I.A. chapter a consultation service at so much (or little) per hour. Home builders then could come in for constructive criticism of the plans they and their contractors had evolved. The improvements thus suggested in plan, design, construction and equipment would be the most convincing proof that architects are worthy of their hire. Rightly conducted it would undoubtedly lead to the employment of architects for full service in many cases, and to supervision fees in others. Why not try such a clinic, in the accepted sense of the word, instead of a reduced-fee-limited-service arrangement which has so many potential elements of dissatisfaction?

Kenneth K. Stowell

EDITOR

PLANNING WITH FURNITURE

SUFFICIENT wall space for furniture grouping is a fundamental necessity in good planning. To accomplish this is especially difficult in designing smaller houses. Standard lower priced commercial furniture is usually merchandised on the basis of a lot of furniture for little money. As a consequence, cheaper sofas are at least seven feet by three feet and average bedroom furniture runs about five pieces to the suite. New conditions make the

relationship of furniture to plan more important than ever. The demand for much sunlight in interiors has resulted in a greater openness of plan, with the result that it is difficult to determine where architecture ends and furniture begins. Solid walls alone no longer separate the functions of the house. Instead, so-called built-in furniture is often used as partitions to mark and separate the uses of various given areas in the home.

FURNITURE AS PARTITIONS

Furniture is not only a means to divide rooms, but to separate the functions of a single room. The former method is most commonly used to divide living-dining room and living room-library. The latter system is found in one-room apartments, offices and studios. Furniture to divide areas is almost always of the so-called case type, that is to say, a chest, bookcase, desk or similar piece

PHOTO: JESSIE TARBOX BEALS



(Opposite page) Living and dining room unified by removal of a separating partition and the construction in its stead of a low bookcase which serves as a bulkhead. Designed by William P. Wachsman. (Right) A projecting desk separates the cork-walled printing space from the social end of this etching printer's office. Donald Deskey, Decorator. (Below) The corner bookcase, cabinet and desk result in an efficient work space that sets it apart from the rest of the office. Vahan Hagopian, Architect. (Below, right) A low built-in bookcase and sofa divide the library from the living room. Edward D. Stone, Architect; Donald Deskey, Decorator

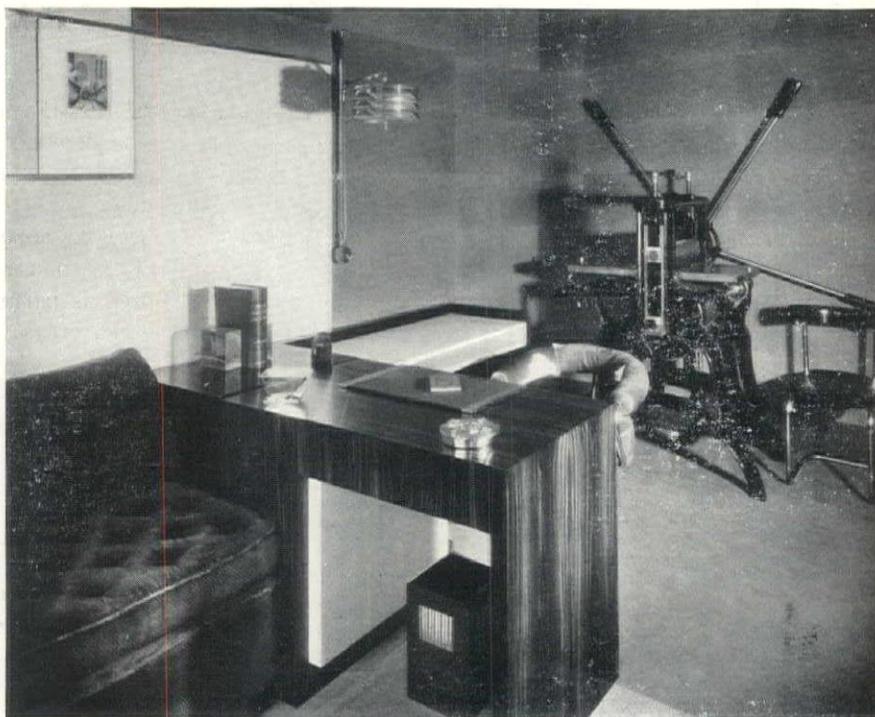


PHOTO: MATTIE EDWARDS HEWITT

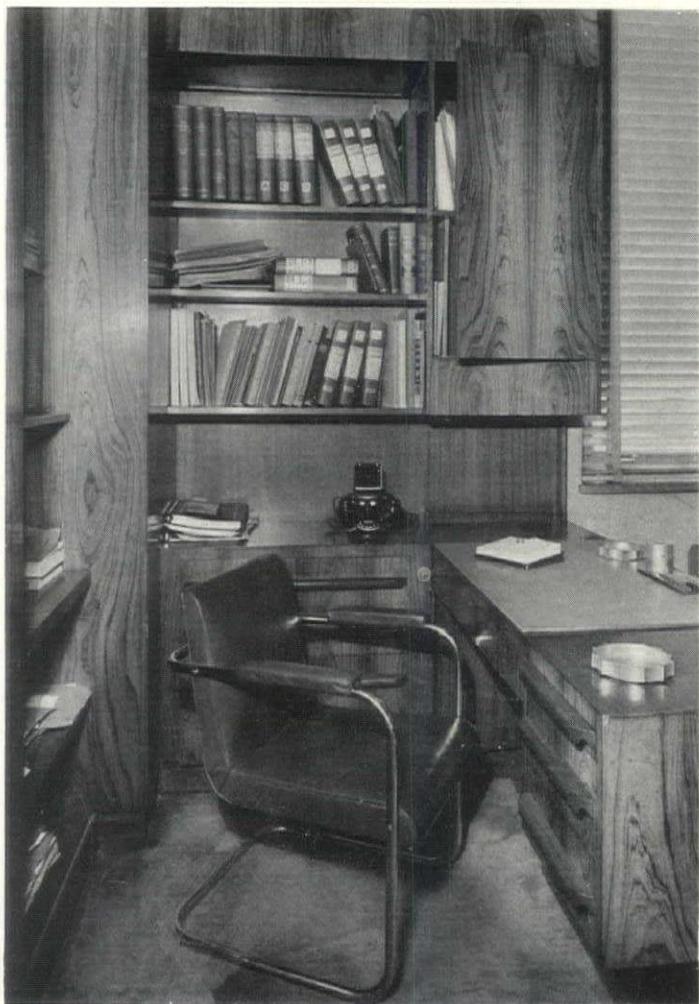


PHOTO: VAN ANDA



PHOTO: SELBY STUDIO

FURNITURE FOR THE CORNER

The weakest point of traditional interior architecture has been the corner of the room. Concentration on axial design has resulted in corners that are merely the joining places of two walls. Occasional solutions such as the corner fireplace, corner cupboard and settle are to be found. To the modern designer, on the other hand, corners are important. The wide acceptance of corner windows is but one example of this. Seating furniture is generally used for the modern corner arrangement. Using furniture of this type is an effective way of developing conversational groupings which can be used readily for dining service or games



A maximum use of minimum space is well illustrated by this corner grouping in a Paris apartment. During the day, the corner sofas, table, chair, desk and bookcases are used for dining and general living. At night, the sofas become two beds, with clever head-board arrangements that serve as night tables. Paul Bry, Decorator





PHOTOS: F. S. LINCOLN

The hospitable air of the grouping made by the built-in sofas is furthered by inventive metal and wood corner table and useful arms. Eugene Schoen and Sons, Architects



The awkward corner caused by the jutting column is turned to advantage by the clever arm and back construction of the sofa designed by Eugene Schoen and Sons, Architects



PHOTO: VAN ANDA

Although it is traditional in appearance, the bookcase in the door, the settle and built-in bookcases make this an excellent example of functionalism. Evans, Moore & Woodbridge, Architects

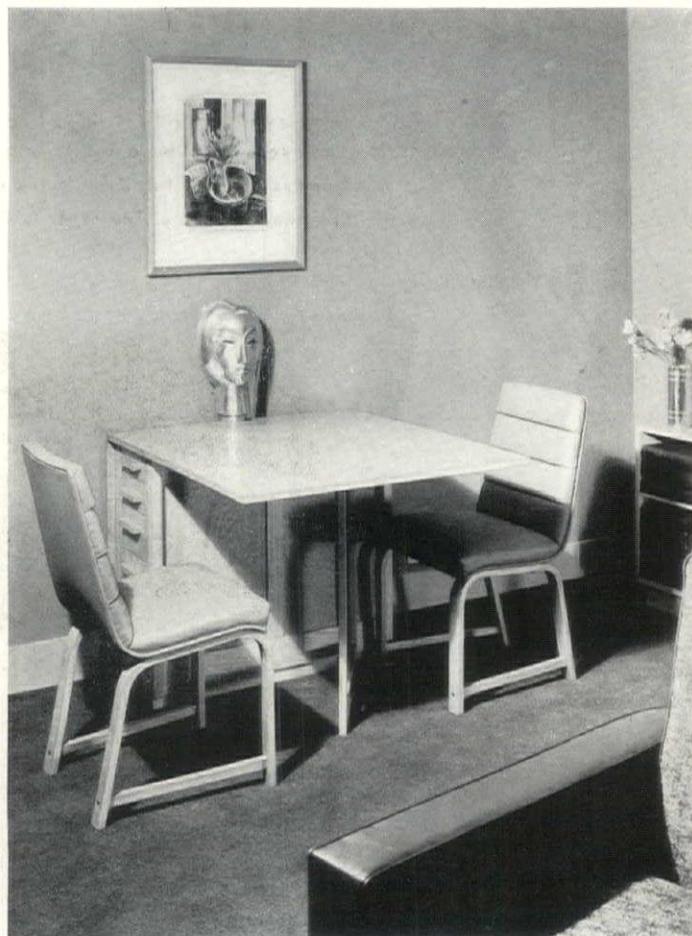
DINING SPACE FURNITURE

The Baronial hall was essentially a dining room used for other living purposes. In the evolution of plan the two functions became separated by a wall. Today they are frequently together, but in inverse order of importance. There are two ways of using furniture in the combination living-dining room. One is the permanent dining grouping which is fixed and inflexible. The other is dual service furniture that takes up little space when not in dining use

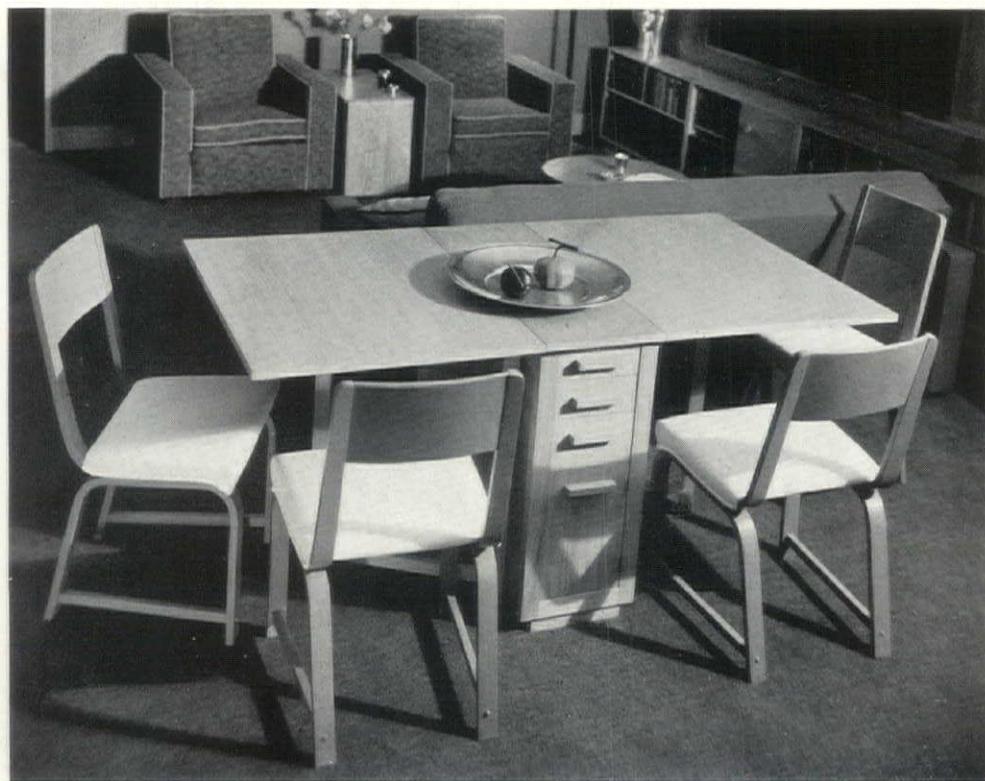


PHOTOS: GERSTEL

What at first appears to be just a cabinet is in reality a cleverly contrived dining table and chairs. The latter have solid wood backs with a convenient hand grip for moving them about (center). The piece can be used as a desk (below). The dining grouping is set when the table is moved in front of the sofa and the chairs are in place (above). Paul Bry, of Paris, was the decorator



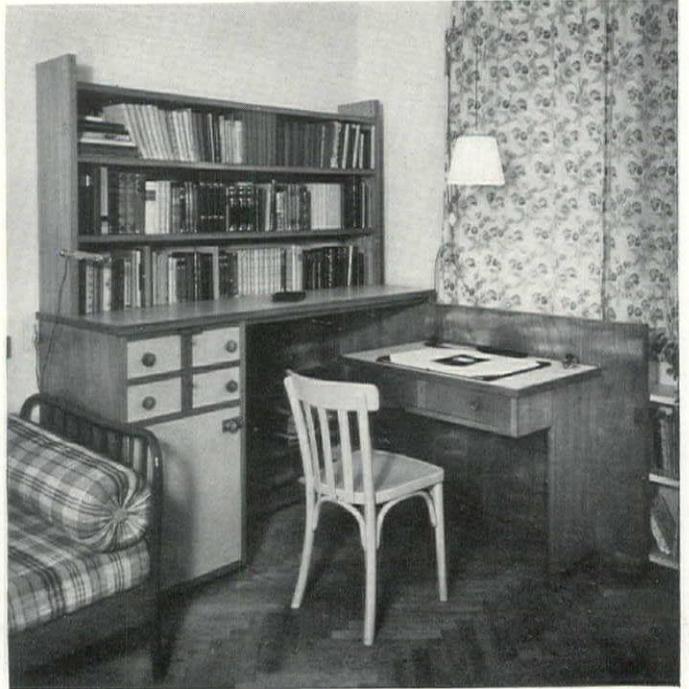
PHOTOS: HEDRICH-BLESSING



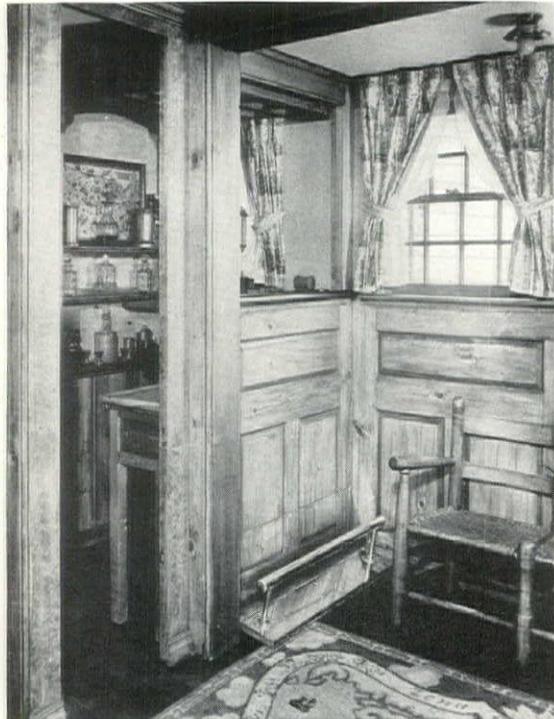
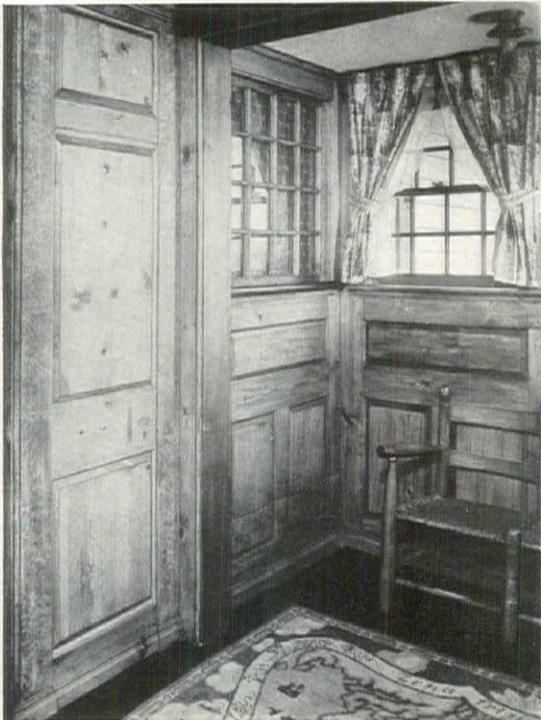
Low cost mass production furniture is ingeniously conceived for limited space use. The table of oak is a new version of the gate-legged table. Only 12 inches by 33 when closed, it opens to 33 by 64 inches. Drawers for linen, silver and other dining accessories are in the pedestal. The chairs of bent-wood have no glued joints at the points of stress. Designed by Gilbert Rohde

FOLDING FURNITURE

The maximum utilization of limited space is becoming increasingly important in the designing of interiors. Therefore, much furniture that is subject to only part-time use is often hidden from sight. The forms of concealment are as various as the types of furniture. Sometimes a door suffices and in other cases a relatively complicated cabinet is used. Often, too, the furniture may be a folding table, folding chair or studio couch which can also be made into a bed.



PHOTOS: SCHERB



(Above) The door of the cabinet - bookcase swings out to become a convenient desk. Designed by Liane Zimbler of Vienna. (Left) The interior window is raised to disclose a clever bar arrangement. Godwin, Thompson and Patterson, Architects



PHOTO: R. W. TERBS

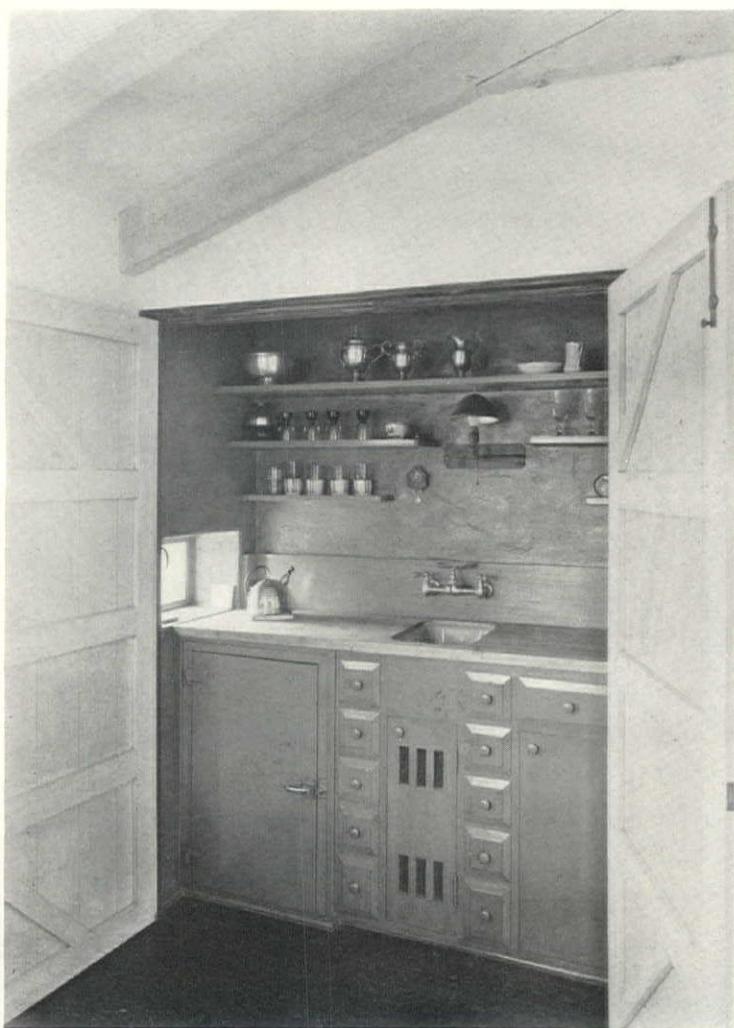


PHOTO: S. H. GOTTSCHO



Doors open to reveal a bar in the paneled library by Northrup and O'Brien, Architects (above, left) and a small studio kitchenette by Schoeppl and Southwell, Architects (above, right). The dining table is concealed in a cabinet by Paul Bry

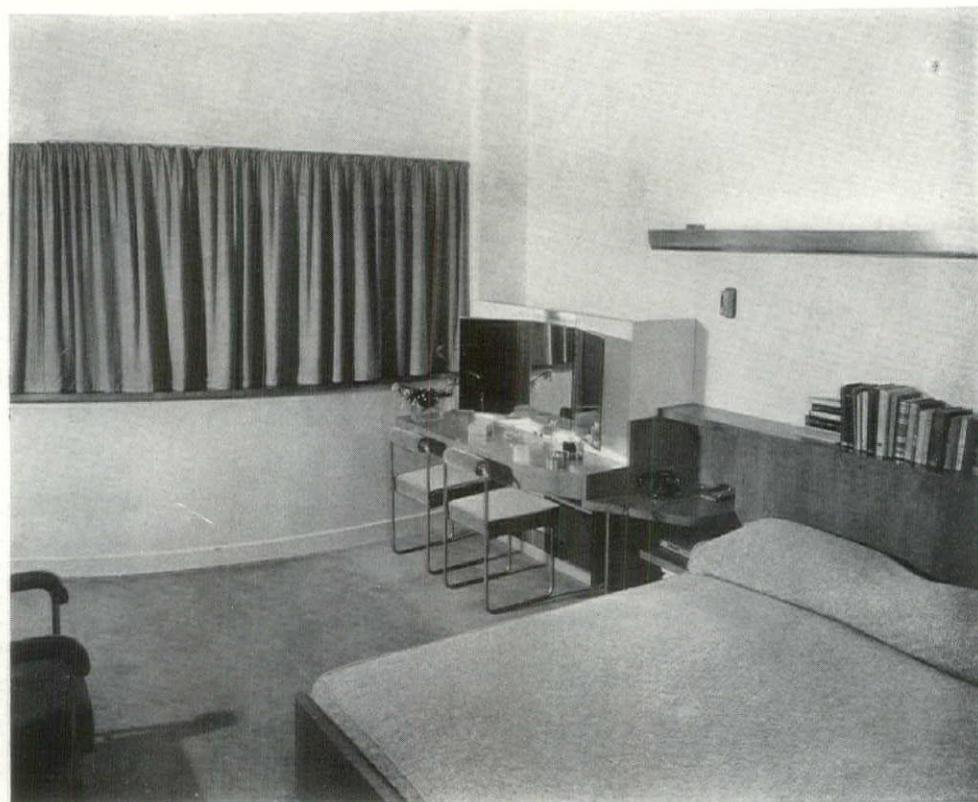
BEDROOM FURNITURE

The treatment of headboards of beds and the design of dressing tables are the most notable examples of the modern influence on bedroom furniture. The first are masterpieces of convenience, usually including concealed lighting, a bookcase, telephone, and a cigarette and ash receptacle. The latter are complicated affairs of mirror and light. The other bedroom pieces have changed little, other than stylistically, in the last 200 years. Even built-in wall bunks, both single and double-deck, frequently are to be found in old European farmhouses and aboard ships

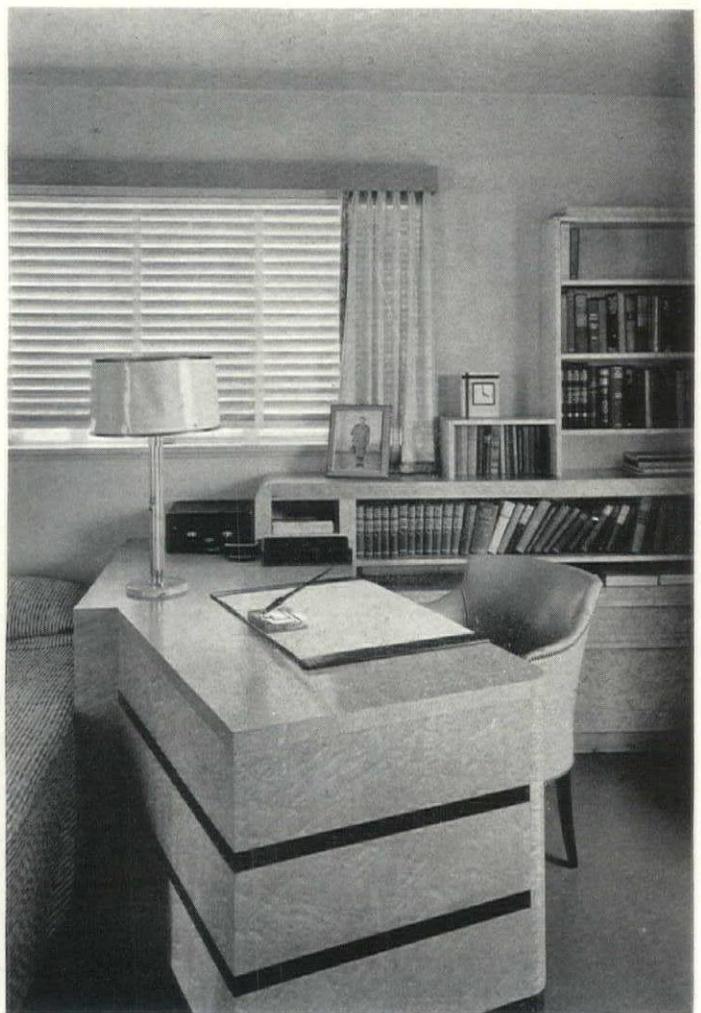
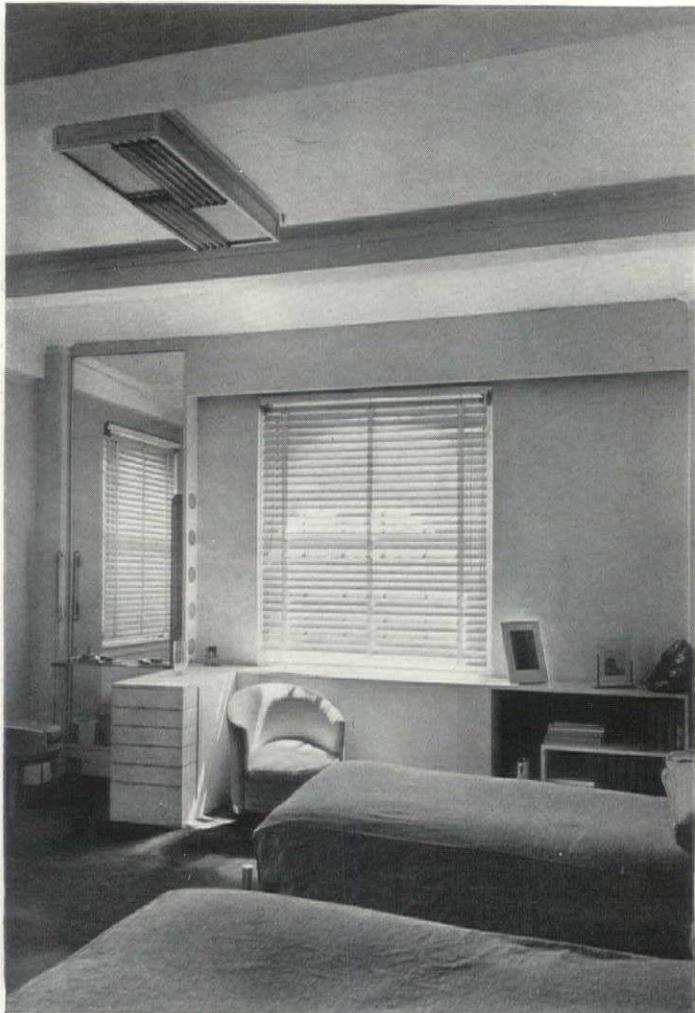


PHOTO: MATTIE EDWARDS HEWITT

The continuous headboard on this bed might easily be counted as architecture, since it carries concealed lighting, a bookcase, drawers, and tables and a telephone. Designed by Henry Dreyfuss



The dressing table is treated as a continuation of the bed headboard. It is adequately mirrored, has convenient drawer space and is illuminated by indirect lighting. William Lescaze, Architect



PHOTOS: S. H. GOTTSCHO

Part of the dressing table projects into the bedroom to achieve an air of isolation. Percival Goodman, Architect (above, left). Desk acts as a division between study and sleeping areas in this bedroom. Robert Law Weed, Architect (above, right). Built-in double-deck wall bunks by Rolf W. Bauhan, Architect (right)



BUILDING FOR BUYERS

BY NEWCOMBE T. MONTGOMERY

AN Operative Builder has bought a tract near the Big City. The tract is one mile from a railroad and two blocks from a main boulevard with a bus line. The usual suburban stores are close by. The tract, featureless, is exhausted farm-land.

The builder believes he can sell five thousand dollar houses on this land, subdivided into lots, fifty-five by one hundred feet. He has put in a sewer, paved streets, laid sidewalks. The small lots are valued at six hundred and fifty dollars.

He designs without much study his typical house; popular taste limits his choice of style to English, Colonial, Spanish and Norman; and popular taste limits his choice of plan to the current bungalow and two story layouts. He chooses the "English bungalow" type, with an unfinished attic space because such houses are selling well in neighboring developments. Having made these basic decisions, he has his draftsman make the working drawings, which are to be quarter-inch plans and elevations. The draftsman draws up the operator's *dream house*, with all the enthusiasm normal to a twenty dollar a week hack. In a day or two blueprints are ready. The blueprint of the front elevation is visual evidence of a concentration of misdirected artistic effort. The builder, however, knows what the public wants; he approves the drawings.

The rumor gets about that our friend, the operative builder, is starting a new development. Contractors in all the building trades pay assiduous and vociferous court. The builder knows the proper distributions of his budget of approximately thirty-five hundred dollars per house. The sub-contractors submit bids, based on the quarter scale drawings and verbal specifications by the owner. The only bids that interest the owner are the lowest; these he beats down, and finally accepts at a favorable figure. The contracts, with the possible exception of the carpentry contract, are verbal. The contracts are given for ten houses, to be built successive-

The speculative builder's methods of supplying what the public "demands" in the small house,—his plan production, close buying, contract arrangements, costs, selling and profits—the facts and figures of a typical operation.

ly in pairs. The trade contracts having been lined up, the builder considers the offerings of materials. Sand, timber, brick, stone and trim must be bought at the right prices. To the material men, as to the mechanics, the bait of ten-house contracts is offered.

The house is started, and in seven weeks it is finished. It is a pugnacious seven weeks, unrelieved by any signs of peaceful co-operation between the builder and the sub-contractors. The low-bid contractors are trying to make a dollar by rushing their poor mechanics, and by cheapening the builder's plan and specifications. The builder insists on a high standard of workmanship; he makes as many changes in plans and specifications as he can force on the sub-contractors. It is a great battle, stimulated by conflicting remembrances of what was said when the contracts were agreed upon. Each side has its weapons: the mechanic has his lien and the contractor has the money. Only the most adamant and vigorously insistent mechanics and material men get payments when due; the patience of the milder group is sustained by promises of future contracts.

But the house is finished and it is open for inspection. The builder buys Saturday-Sunday advertising space in the newspapers and erects big signs and bright purposeful arrows along the boulevard.

The salesman who shows the public through the house is the same young man who drew the plans for the house. He is more willing as a salesman than as a draftsman because selling means real money to bolster his twenty dollars a week. He is not a licensed salesman. No matter, the builder thus avoids payment of the difference between a fifty dollar commission and a legal commission.

The salesman spots an interested couple and concentrates on them, ignoring the numerous lookers. The couple completely inspect the house; they come once, twice, bring their friends and relations, three times, four times, and buy.

Why has this couple bought the house?

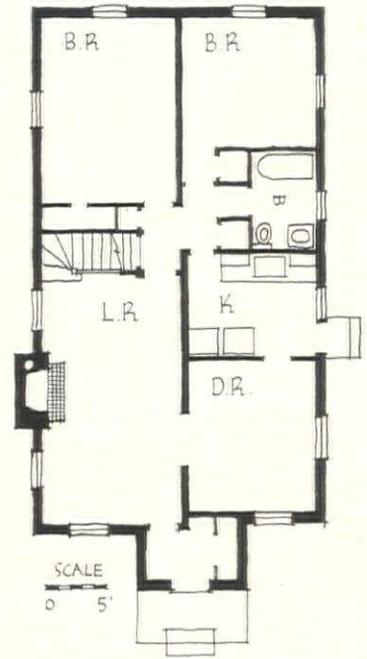
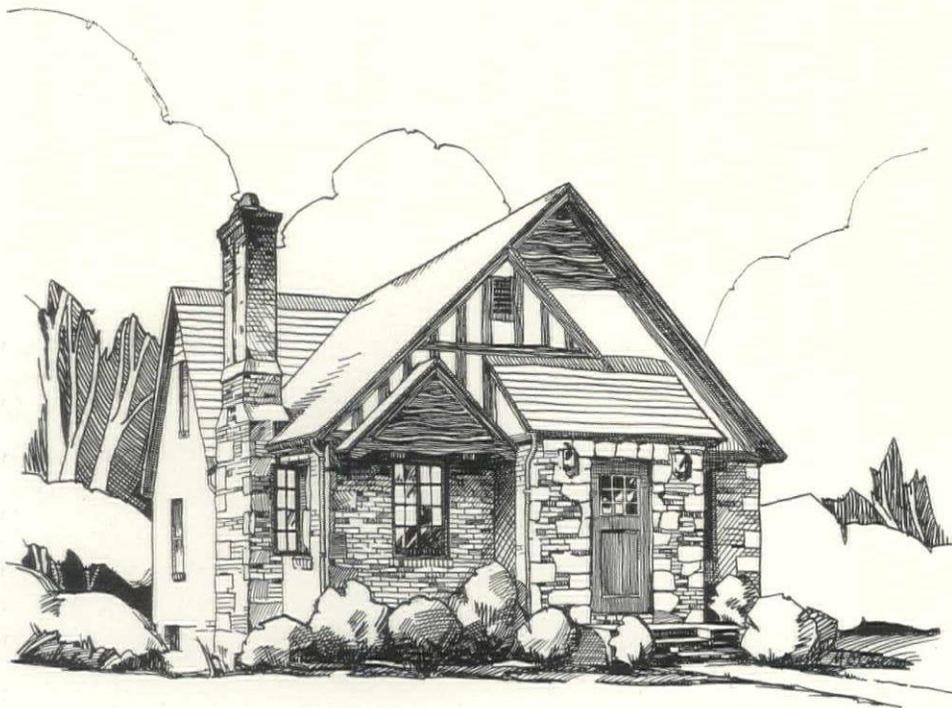
The man is about forty, his wife a little younger and they have one child. They have been keeping house for about twelve years in rented apartments and houses. They know what they want and they limit what they want to what they can reasonably expect. The style of the house must be classifiable as English, Colonial, etc. The buyer's ego is satisfied if he sees in his house a great recognized style, and it is correspondingly starved if his house is generically individual. To him English means rough brick and stone, half-timbering and gables. The detail can and should vary from that of neighboring houses; the couple, mass-minded as they are, have a memory horror of identical row houses.

The plan appeals to this couple. The rooms are conventional and can accommodate comfortably a clutter of furniture. The kitchen pleases the wife. The compactness, the modern sink, range, cupboards, all appeal to her. The bathroom with tile and colored fixtures, is standard. The usual

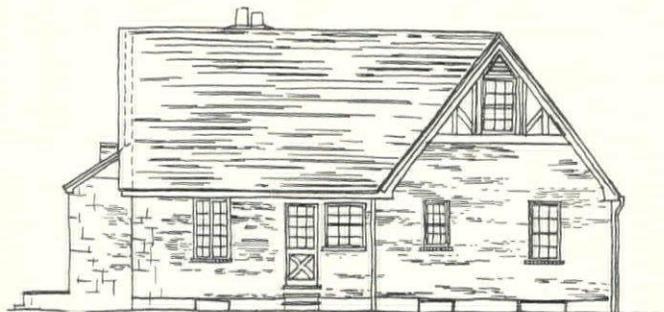
complement of closets is expected. The buyer is disappointed not to have fitted closets in this five thousand dollar house. (Advertising has made housewives covetous of things their husbands cannot buy.) The full cellar is much appreciated because it insures a dry first floor, provides storage space, space for rough and noisy indoor recreation, and for special work at home. When money is easier the couple plan to make of the unfinished attic a room and bath for their child.

The husband is interested in the construction. He has paid maintenance bills for years, and he knows that poured concrete foundations, good floor joists, good doors, window and trim, metal corner beads and rights, clear slate, copper gutters, brass feed lines, and a standard boiler, minimize the inevitable maintenance expenditures.

THE PUBLIC HAS BUILT A HOUSE



The mystifying appellation "English Bungalow Style" is used by the speculative builder to identify this veneered conglomeration of brick, stone, timber and stucco.



THE BUILDER'S SPECIFICATIONS AND COSTS

TOTAL CUBAGE OF HOUSE—25,260 C.F.

EXCAVATION . . . excavate full cellar 5'-6" below grade, backfill and rough grade property.	\$65.00	TRIM . . . Stock sash, doors. White pine door frames, base, chair-rail, mantel, kitchen cabinets, closet shelving, etc.	
FOUNDATION . . . 18" x 12" concrete footing, 10" poured concrete wall, footings for Lalley columns, concrete cellar bottom area footings, front stoop footing.	\$225.00	Materials	\$300.00
CARPENTRY . . . rough lumber—fir, second grade, 16" o.c. studding, joist, and rafters; 2 nail sheathing for brick veneer, 2 nail sheathing for slate roof, 2 nail rough flooring, 3" x 8" first floor joist, 2" x 6" rafters, chopped 4" x 8" chestnut beams exposed in living room. White pine exterior crown mould and half-timbering		Labor	\$40.00
Labor	\$160.00	PAINT . . . Two coats of stain outside. Priming and two coats of paint inside, on all woodwork and walls.	
Materials	\$400.00	Labor and materials.	\$140.00
MASONRY . . . 4" Brick and stone veneer walls, brick front stoop, kitchen steps and cellar window areaways. Hard, dark bricks.		HARDWARE . . . Complete, including locks on every door.	
Labor	\$200.00	Labor and material.	\$45.00
Materials	\$125.00	RANGE . . . Gas, with regulator.	\$47.00
LATH . . . Wood lath, metal corner rights, metal corner beads. 1/2" Celotex over studio living room.		SHADES	\$12.00
Labor	\$60.00	FRONT SIDEWALK	\$25.00
Materials	\$60.00	LANDSCAPING . . . Top soil, grass seed, shrubs.	\$40.00
ELECTRICITY . . . Wiring, outlets, fixtures, kitchen door bell, front door bell chimes.			
Labor and materials.	\$110.00	SUB-TOTAL	\$3,439.00
PLASTER . . . Brown, scratch, and white coats Craftex finish in living room.		PERMITS, FEES, SURVEYS	\$75.00
Labor and materials.	\$260.00	ADVERTISING	\$75.00
PLUMBING and HEATING . . . American Radiator coal-burning boiler, steam system, exposed radiators. Bucket-a-Day hot water heater, copper boiler; brass feed lines. Standard colored bathroom fixtures. Enamel laundry tubs.		SALARIES, SALESMAN'S COMMISSION	\$200.00
Labor and materials.	\$610.00	LAND . . . 55' x 100', including street paving.	\$650.00
ROOF . . . No. 2 Clear slate, roofing paper. Copper gutters and leaders.		FINANCING	\$300.00
Labor and materials.	\$225.00	SUB-TOTAL	\$1,300.00
STAIRS . . . Pine stairs with hand-rail to second floor; pine stairs with hand-rail to basement.		TOTAL COST TO DEVELOPER	\$4,739.00
Labor and materials.	\$40.00	SELLING PRICE	\$5,290.00
TILE . . . Second grade tile. Bathroom; tile on floor, tile three sides above tub to height of 6'-6", tile other walls to height of 4'-6". Kitchen sink has two tile drainboards and tile splash-wall up to line of cupboards. Tile hearth in living room.		PROFIT TO DEVELOPER	\$551.00
Labor and materials.	\$120.00	CHARGES TO BUYER UNDER FEDERAL HOUSING ADMINISTRATION MORTGAGE PLAN	
FINISHED FLOORS . . . No. 3 oak, scraped and shellacked.		SALE PRICE	\$5,290.00
Labor and materials.	\$100.00	DOWN PAYMENT	\$1,290.00
LINOLEUM . . . Kitchen floor.		MORTGAGE	\$4,000.00
Labor and materials.	\$30.00	MONTHLY CHARGES	
		5 per cent interest and 20-year amortization.	\$26.40
		Service charge	1.64
		Mortgage insurance	1.67
		Taxes	10.00
		Fire insurance50
		TOTAL MONTHLY CHARGE	\$40.21

PLANNING DATA DOCKET*

BUILDING a house is a work of harmonizing countless elements, both tangible and intangible. The former include materials, forms and equipments, and their choice is influenced by the latter,—the tastes, interests and interrelations of the individuals who will live in the house. Residence planning is, therefore, structural, esthetic and social, at the same time. Structural safety and economy are natural responsibilities of the architect. Because esthetic and social considerations are equally important in planning, the preferences and activities of each individual and of the family must be understood by the architect. Only by knowing all that is expected of the house, all the purposes it must fulfill, all the services it must provide, can the architect arrive at the best solution for each particular client.

A frank and full discussion of the financial aspects of the project will clear the way for the most direct and rapid prog-

ress in planning, will prevent false starts and will result in the most efficient and economical house. No client will be offended by the architect's questions when he realizes that each and every question asked is pertinent to the planning of the house and that the objective is solely that of determining the exact requirements and limitations. The conference in which the following fact list is used should serve to clarify in the owner's mind his needs and desires, and to provide the architect with a factual basis for his planning. Neither client nor architect would want to forget or to overlook even one single item that would make this a better house, so there is a sound reason for every item of the Planning Data Docket. It can, of course, be considered as confidential between architect and client as a doctor's report is between physician and patient, and the client will not think of withholding any information which might make this for him a better house.

PLANNING DATA DOCKET

FOR THE HOUSE OF.....
(Owner's legal name)

Who now resides at.....
 Phone.....

Whose business address is.....
 Phone.....

The new house will be the house of Mr. and Mrs. and
 children named..... aged.....

(Other relative or resident)

and servants [in bedrooms bath(s)]

Garage for cars.

The house to cost about \$..... exclusive of lot, landscaping, and furnishing.

I. THE SITE

Location

Site survey map?..... Approximate dimensions

Character	Hill	Wooded	Seashore	Suburban
(Encircle)	Valley	Cleared	Sand Rock	City

Views

Traffic conditions.....

Streets or roads on N..... S..... E..... W..... sides of lot.

* Compiled by American Architect in co-operation with William Lescaze and Frederic Arden Pawley.

II. FUTURE AND OCCUPANCY

Should this entire program be that of a "growing house" in order to spread the building budget over a longer period and provide for additional facilities, etc.? If so, which elements must be included in:

First stage

Second stage

Third stage

When must house be ready?

Will house be a permanent or seasonal residence?

Lived in from to of each year.

Closed entirely or is a resident caretaker to be employed?

Are special precautions for security necessary?

III. INDIVIDUAL ACTIVITIES AND REQUIREMENTS

(A) MRS.

Interests, major minor

Professional or other work Office or separate study

Studio Music Instrument Storage

Hobbies, avocation, collections

Active sports

Equipment storage for

Other Activities

SLEEPING. Separate Bedroom shared size

Beds, twin double single sleeping porch?

Prefers morning sun Sensitive to noise?

Reading in bed At bedside, provide table

telephone radio call bell to

master switch to hall 1st floor outside floodlight

DRESSING. Separate dressing room Boudoir

Combined dressing room and bath

Combined dressing room and wardrobe

Built-in drawer space dressing table

dressers fitted closets triple mirror

cheval glass jewel safe

CLOSET AND STORAGE SPACE

CURRENT USE CLOTHING

Hanging pole length ft., for dresses suits coats

Number of hats Pairs of shoes on shoe rack

Shoe bag with pockets in cabinet

STORED OUT OF SEASON CLOTHING Cedar closet

Hanging pole length ft., for dresses suits coats

Number of hats Pairs of shoes Luggage

BATH. Private or share with Access from hall

Used for exercise kind

Shower kind

Medicine cabinet Towel and toilet article cabinet
 Scales built-in
 Dressing table Chair Mirrors sizes
 Electric outlets for: water heater appliances ultra violet lamp
 FURNITURE wanted in bedroom (list)

 wanted in dressing room (list)

(B) MR.
 Interests, major minor
 Business or profession
 Office work brought home requirements for such
 Hobbies Collections
 Requirements
 Active sports, athletics
 Provide storage for
 Other activities
 SLEEPING. Separate bedroom shared size
 Beds, twin double single sleeping porch
 Prefers morning sun Sensitive to noise?
 Reading in bed At bedside, provide table
 telephone radio call bell to
 master switch in hall 1st floor outside floodlight
 DRESSING. Separate dressing room
 Combined dressing room and bath
 Combined dressing room and wardrobe
 Built-in: drawer space dresser
 fitted closet(s) mirror(s) safe
 CLOSET AND STORAGE SPACE
 CURRENT USE CLOTHING
 Hanging pole length ft., for suits coats dresses
 Number of hats Pairs of shoes on shoe rack
 Shoe bag with pockets in cabinet
 STORED OUT OF SEASON CLOTHING
 Cedar closet Hanging pole length ft., for suits,
 coats, dresses, hats, pairs of shoes
 Luggage
 BATH. Private or shared with
 Access from hall Used for exercise kind
 Shower kind medicine cabinet
 Towel and toilet article cabinet scales
 Built-in
 Electric outlets for: water heater electric razor ultra-violet or infra-red lamps
 Mirror(s) Size(s)
 FURNITURE wanted in bedroom (list)

 wanted in dressing room (list)

(C) CHILDREN

Names and ages

Interests, major

 minor

Hobbies

Provide

Work or study (college or school grade).....

Provide therefore

Active sports

Equipment to be provided for (bicycle, motorcycle, model boats, planes, etc.).....

SLEEPING. Separate bedroom or shared with size

Bed bunk double-decker

Sleeping porch Prefers morning sun.....

Sensitive to noise..... Reading in bed At bedside provide,

table radio call bell to

Switch for hall night-lighting

DRESSING. Separate dressing room Combined dressing room and bath

Combined dressing room and wardrobe.....

Built-in: drawer space dressing table

 fitted closet(s) mirror(s)

CLOSET AND STORAGE SPACE

CURRENT USE CLOTHING

Hanging pole length..... ft., for suits coats dresses.

Number of hats pairs of shoes on shoe rack

in shoe bag in cabinet

STORED OUT OF SEASON CLOTHING

Cedar closet Hanging pole length ft., for suits,

 coats, dresses. hats, pairs of shoes.

Luggage

BATH. Private or shared with

Access from hall..... Used for exercise

Kind

Shower Kind

Medicine cabinet Towel and toilet article storage

Scales built-in

Electric outlets for: water heater appliances ultra-violet or infra-red lamps

Mirror(s) Size

FURNITURE wanted in bedroom (list)

 wanted in dressing room (list)

(D) OTHER RESIDENT

Relationship Age

In active state of health or requiring special consideration?

Interests, major.....

 minor

V. PROVISIONS FOR GUESTS AND ENTERTAINING

First floor lavatory and W. C.? Study, etc., used for wraps?
 Powder rooms? Bedroom(s) used for wraps?
 How often would you have house guests?
 Overnight Week-end
 Protracted

RECREATION ROOM	Basement	Ping Pong	Boxing
(Encircle)	Bar	Billiards	Games
	Kitchen service	Dancing	Gymnasium
	Workshop	Hobby room	

VI. PLAN AND SIZE IDEAS (tentative)

Approximate size of living room by Ceiling height
 Is close relation between indoor and outdoor living spaces desired?
 Terrace(s) Upper level deck(s)
 Conservatory [flower window(s)] Upper floor sitting room
 Is separate dining room desired or will part of living room or connected area be preferred for this use?

 Breakfast alcove Service to terrace

VII. DESIGN, MATERIALS, AND ORIENTATION PREFERENCES

Style preferences?
 Materials preferred (encircle): Wood-Brick-Stone-Stucco
 Which materials are commonly used in the neighborhood?

Orientation preferred for following spaces: (for views, sun, shade, prevailing breeze, etc.)

Living room
 Dining area
 Terrace(s), deck(s)
 Study, library, office, studio
 Bedroom No. 1, for Exposures
 Bedroom No. 2, for Exposures
 Bedroom No. 3, for Exposures
 Bedroom No. 4, for Exposures
 Kitchen and other services

VIII. PLAN REQUIREMENTS FOR POSSESSIONS (please give preferred locations)

Number of books If increase is expected what total should be planned for?
 Are there oversize volumes requiring special shelving? height
 Are all to be shelved in one room?
 Built-in book cases?
 Number of periodicals received filed? bound?
 Radio [remote control(s)] cabinet size by height
 Location(s)
 Number of records or albums to be provided for

Motion picture projector.....

Film storage

Television

Have you special furniture, sculpture, paintings, etc., for which the house or part of it must be designed?

Trunk and luggage storage (give number of each type)

..... hand bags suit cases hat boxes

..... storage trunks wardrobe trunks steamer trunks

Should these all be stored in one place or near individual clothing storage?

Number, make and type of car(s).....

Should garage be separate or incorporated with house?

Gas and oil storage

Bicycles, wheel toys, etc.

Tools, (garden, garage)

IX. HOUSING AVERSIONS AND PREFERENCES

What have been the principal irritations and inconveniences found in former dwellings with respect to:

Closets Prefer

Bathroom fixtures and layout

 Prefer

Kitchen arrangement

 Prefer

Interior finish materials

 Prefer

Color schemes: Prefer (vigorous, medium, pastel, neutral, favorite colors).....

.....

Flooring and cleaning Prefer

Window placement and type Prefer

Lighting Prefer

Signals (rooms, doors, dining room) Prefer

Telephones Prefer

Heating Prefer

Fireplaces Prefer

Ventilation Prefer

Plumbing Prefer

Basement Prefer

X. SERVICES

Is pantry necessary? Pass-cupboard for service through kitchen wall?
Where and how will linen and silver be stored?
What type of range is desired? What type of refrigerator?
Mechanical dishwasher? Type of sink(s) and drainboards
Cabinets, cupboards, working tops Other equipment (mixer, coffee grinder, etc.)
Work desk, telephone Mechanical ventilation
Built-in incinerator Electric garbage grinder
Are provisions to be stored in bulk? Will canning or preserving be done at home?
Is laundry chute desired? Preferred location for laundry
Number of tubs Type of washer
Ironer Electric dryer
Where should built-in ironing board be placed
Mechanical ventilation for laundry
Sewing room?

XI. CONTRACT AND DRAWINGS

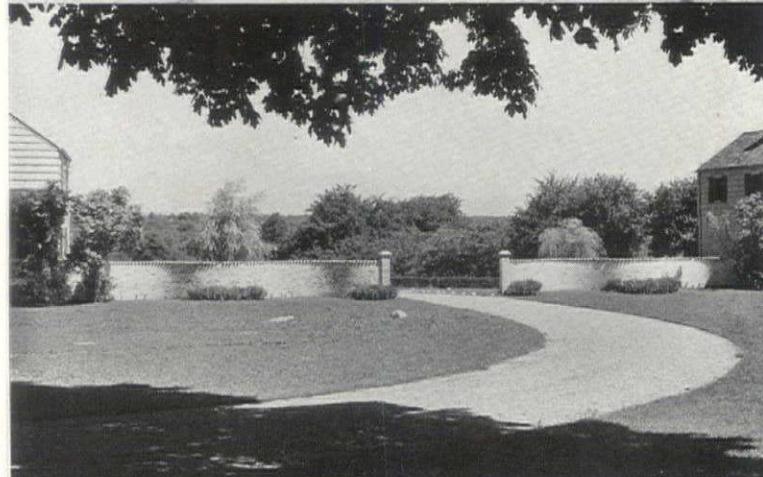
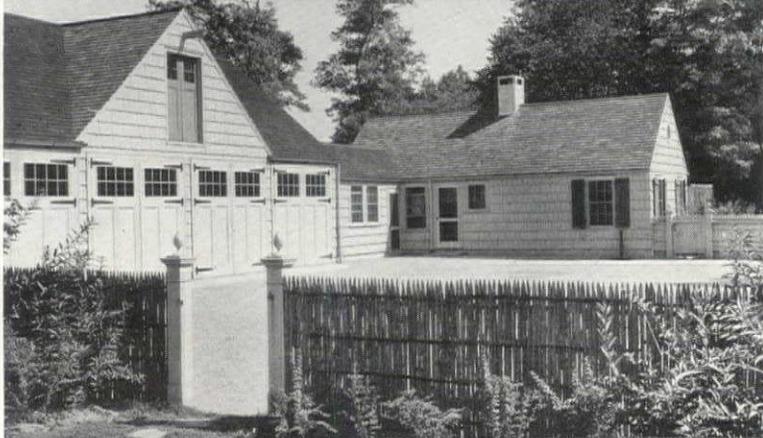
Type of owner-architect agreement preferred:
Percentage basis Fee-plus-cost
Type of owner-contractor agreement or contract preferred:
Stipulated sum Cost-plus-fee
Can plans be read and visualized or are renderings preferred?
Is a three-dimensional model desired?

ARCHITECT'S RECORD

Copy of A.I.A. Handbook of Architectural Practice lent
Agreement: Standard A.I.A. (date)
Letter exchange (date)

PLAN SUMMARY

Living room, size	Ceiling height	Orientation
Dining area type	Size	Orientation
Terrace(s), deck(s)		Orientation
Study, library, office, studio	Size	Orientation
Recreation areas		
Bedroom No. 1, for	Size	Orientation
Closets	Dressing	Bath
Bedroom No. 2, for	Size	Orientation
Closets	Dressing	Bath
Bedroom No. 3, for	Size	Orientation
Closets	Dressing	Bath
Bedroom No. 4, for	Size	Orientation
Closets	Dressing	Bath
Kitchen type	Size	Orientation
Laundry	Cellar	
Other areas		
Garage location	Number of cars	



AUTOMOBILES AND THE HOUSE

1—GARAGES . . . RESIDENTIAL

**2—DRIVEWAYS, BASIC PRINCIPLES
AND DESIGN**

**3—CIRCULAR DRIVEWAYS,
BACK-AROUNDS, JUNCTIONS**

**AMERICAN ARCHITECT
TIME-SAVER STANDARDS
MAY 1936**

GARAGES...RESIDENTIAL

PURPOSE

This sheet establishes recommended dimensions and clearances for minimum types of residential garages. These data and general notes should be considered as basic minima to produce a garage adequately sized and equipped for modern usage. Adjustment of individual items and dimensions are possible as applied to various practical conditions.

GENERAL

Since the automobile is now generally an essential, garages should be planned—whether attached or not—as an integral part of the house.

If attached, local code requirements should govern construction to result in a 1-hour fire rating as specified by the National Board of Fire Underwriters. In most urban fire zones this usually involves "fireproof" construction of walls, floors and roof and use of wire-glass in all window openings and exterior doors. From garage to dwelling only one opening, protected by a self-closing fire-door with a sill raised at least 1'0" above the garage floor, is permitted.

If detached, convenience in modern use suggests connection to the dwelling by means of a covered walkway. Relative location and construction should follow clauses of local codes. Most urban codes specify a maximum distance under which "fireproof" or "fire-retarding" construction must be used.

Safety measures—and most building codes—do not permit use of the garage as a space for general storage or a work place for any activity other than the servicing of an automobile. Prevalence of gasoline and carbon monoxide fumes and possibilities of collision accidents dictate that garden work rooms, tool sheds, hobby shop spaces and space or equipment of a similar sort be segregated from areas for car storage and service.

SIZE

This is governed largely by car dimensions (see Table), partly by proposed use. If used only for car storage, minimum dimensions given here can be applied directly. But possibilities of including automotive equipment storage spaces, work benches, cleaning and repairing devices, etc., should be anticipated. If any of these are included, working clearances must be planned for. A minimum clearance for passage is 1'6". For minimum working clearance allow 2' when workbench is at end of garage where front of car is habitually placed, 3' for other conditions.

Minimum size should include clearance necessary to get in and out of car and to enter and leave the garage. This is largely governed by the size of the car door relative to the interior dimensions of the garage. Thus, dimensions shown in Figure A are practical only for small cars. Since doors of larger cars could be opened only with difficulty, for them the space is useful only as dead storage. Minimum interior dimensions for a single small car, live-storage garage without work space is 8'6" × 18'0".

Size of a multiple garage is subject to the same variations as that of a single-car garage. In addition, if only one car is in constant use, space for others may be considered dead storage and reduced accordingly. See Figure C.

Door Sizes. Minimum door sizes depend somewhat upon the ease by which a car can be driven into the garage. Thus, with a straight, unobstructed approach a 7'4" clear opening is practical for a minimum one-car garage. This allows a desirable total clearance of 1'6" between the average small-car width and door jambs. If entrance requires maneuvering or involves a curve near the doors, clearances should be increased and door openings enlarged accordingly. The extent depends upon the size of car and its angle of rake in making the necessary entrance turns. See T-SS. Sheets Serial Nos. 45 and 46, May, 1936.

Widths of commonly used one-car doors range: 7'4" = (3'8") × 2; 8'0" = (4'0") × 2; 9'0" = (3'0") × 3. Doors may be made with any number of hinged leaves to swing in or out into restricted spaces. Heights range: 7'0", 7'6", 8'0". An average maximum car height is 6'3". For practical purposes a clearance of 9" is sufficient, though a design factor may make an increased door height desirable. For ordinary side-hinged doors clearance for hardware should be 6" minimum; for offset hinges or corner tracks, minimum jamb clearances range 2" to 2'2";

OVERALL DIMENSIONS OF AUTOMOBILES

TYPE OF CAR	LENGTH L	HEIGHT H	WIDTH		
			Doors Closed W	One Door Open W'	Two Doors Open W''
YEAR - 1936					
SMALL	13'-6"	5'-7"	4'-10"	6'-11"	9'-0"
	to 16'-3"	to 5'-10"	to 5'-10"	to 8'-4"	to 11'-3"
MEDIUM	15'-5"	5'-6"	5'-6"	7'-8"	9'-8"
	to 16'-4"	to 6'-0"	to 6'-2"	to 9'-5"	to 12'-8"
LARGE	16'-2"	5'-6"	5'-7"	7'-10"	9'-11"
	to 19'-10"	to 6'-2"	to 6'-5"	to 10'-5"	to 14'-8"
MAXIMA AND MINIMA - 1931 THROUGH 1936					
ALL	13'-6"	5'-6"	4'-10"	6'-11"	9'-0"
	to 20'-0"	to 6'-3"	to 6'-5"	to 10'-5"	to 14'-8"

head clearances 6" to 11½". Lifting doors require special hardware with clearances ranging 2½" to 1'10" from clear opening to finished ceiling, roof bracing or rafter rake; jamb clearances 3½" to 6". Special dimensions should be obtained from manufacturers.

FLOORS

Rough floors should be of reinforced concrete laid over a 4" bed of cinders that has been well tamped, wetted and rolled. Thickness and reinforcing will vary with spans and climatic conditions. Minimum requirements constitute a 4" slab reinforced with heavy wire mesh. For structural data to meet other conditions see T-SS Sheet B5.1.1. (August, 1934, Serial No. 5). Slabs can be designed for a live load of 80 lbs. per sq. ft. Footings should be designed to resist damage from local frost conditions.

Floor surface can be smooth cement, integrally waterproofed and brushed to a non-skid finish, rough-surface paving tile or brick laid with a ½" or ¾" joint in a cement setting bed.

Drainage is essential. In minimum garages a floor pitch of ⅛" per foot toward the entrance is usually sufficient. In larger garages the floor should pitch four ways to a drain. This should have a removable cover for cleaning and, when emptying into a storm sewer, should be fitted with a grease trap. In cases where minor servicing only will be done, drainage can be run economically and efficiently to a dry well.

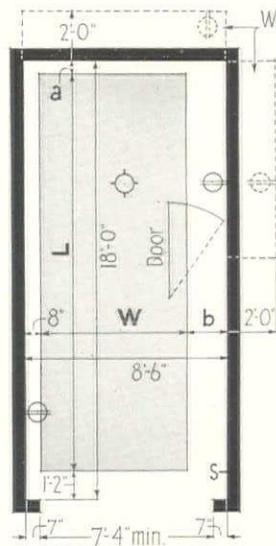
EQUIPMENT

Electrical equipment should include, as a minimum, general interior lighting of 60 w. per 150 sq. ft. of floor space. This should be controlled at the garage and also in the house. In addition one convenience outlet should be installed on each side for a local service light or for portable power tools. In multiple garages or where complete servicing is contemplated, installation of a small ventilating fan, telephone connections and a power outlet on a separate circuit should be considered. Automatic control, either instantaneous or delayed operation, of garage doors is now a practical possibility by means of (1) a manually operated switch mounted on a driveway post, (2) by use of photoelectric cells operated by beam interception on the driveway or by the headlights of the car, (3) by radio transmission from a small ultra-short wave set within the car to an accurately tuned, motor-operating receiver in the garage. For automatic controls, motor-driven door operators, etc., consult manufacturers.

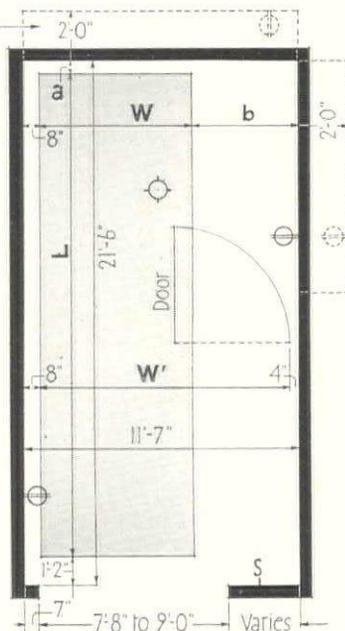
Plumbing and heating in a minimum detached garage is usually uneconomical. A hose bibb for car washing is sufficient; and temporary heat can be obtainable from a portable electric unit. Both detached and attached garages should be insulated if possible. If attached, heating from an exposed steam or hot water main or installation of a small ceiling radiator is ordinarily sufficient. Attached garages should also contain a wash basin or small slop sink, preferably served by both hot and cold water lines.

GARAGES... RESIDENTIAL

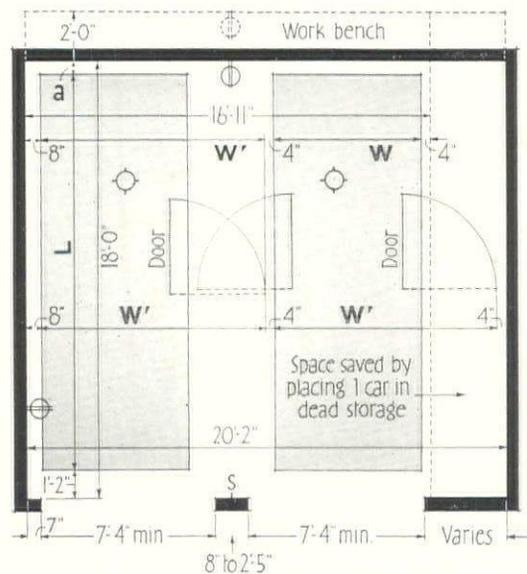
RECOMMENDED MINIMUM Dimensions, Clearances and Electrical Equipment.



A SMALL TO MEDIUM CARS



B MEDIUM TO LARGE CARS

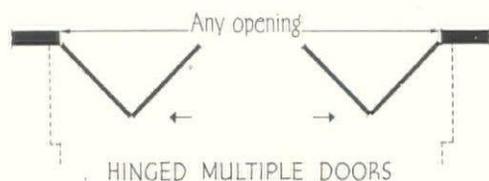


C MULTIPLE GARAGES, MEDIUM CARS

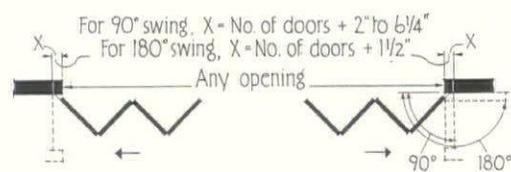
Center door posts may be omitted, if proper doors are selected. See below.

VARIABLE DIMENSIONS (without workspace) $a = 6''$ $b = 1'-8''$, (with workspace) $a = 2'-0''$ $b = 2'-0''$

HINGED DOORS

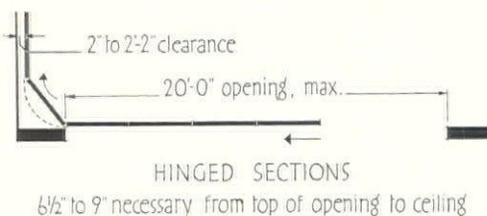
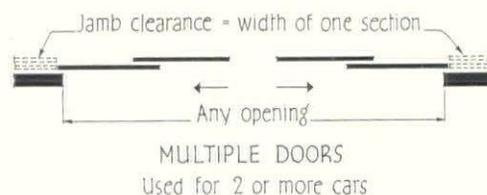
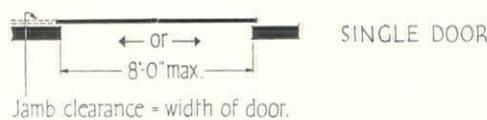


Swinging to one or both sides. Hinged either in or out and used for 2 or more cars. 6" to 11 1/2" necessary from top of opening to ceiling.

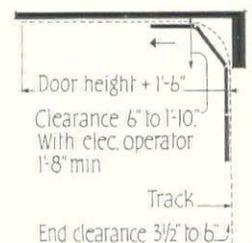


Swinging to one or both sides. Hinged either in or out and used for 2 or more cars. 6" to 11 1/2" necessary from top of opening to ceiling.

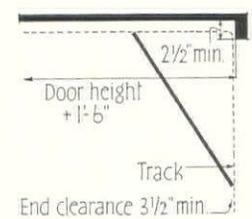
SLIDING DOORS



LIFT DOORS



SECTIONAL DOORS



ONE-PIECE DOORS

WIDTHS OF COMMONLY USED DOORS

7'-4" Opening	2 doors - 3'-8"	3 doors - 2'-5"	4 doors - 1'-10"
7'-6" "	2 " - 3'-9"	3 " - 2'-6"	4 " - 1'-10 1/2"
8'-0" "	2 " - 4'-0"	3 " - 2'-8"	4 " - 2'-0"
8'-6" "	2 " - 4'-3"	3 " - 2'-10"	4 " - 2'-11 1/2"
			5 doors - 1'-8"

HEIGHTS: 7'-0", 7'-6", 8'-0", Lift doors generally 4 sections high, sometimes 2 or 3.

DRIVEWAYS . . . Basic Principles & Design

PURPOSE

Use of the accompanying diagrams, dimensions, and formulae will enable the designer to lay out straight or curved driveways to suit any condition between extremes of (1) minimum practicability and safety, and (2) maximum ease of driving.

Data on this sheet and those on T-SS Serial No. 46, May 1936, were adopted from material originally developed by Ernest Irving Freese which appeared in the September, 1933, issue of American Architect under the title, "How to Design Practical Curved Driveways."

GENERAL

Unless an automobile is driven in a straight line, rear wheels do not follow exactly in the tracks of front wheels, because front wheels only are controlled by the steering gear. Hence, on curved driveways, the inner rear wheel may track off a roadway if the inner radius of the drive is too great. The outer front wheel may track off if the outer radius is too small.

Determination of the minimum width of driveway for various radii (and vice-versa) depends on three properties of an automobile: "tread," "wheel-base," and "turning radius." To these properties are added inside and outside clearances to provide a margin of safety, so that both front and rear bumpers, fenders, trunks, etc., will safely clear shrubbery or walls bordering the drive.

The "tread" of a car is the distance center-to-center of the front or rear wheels. The tread varies both between the front and the rear wheels and with the make or year of the car. The tread of the rear wheels, being a constant on curves and normally greater than that of the front wheels, is used in driveway calculations.

The "wheelbase" is the distance center-to-center between front and rear axles. It also varies.

The "turning radius" is the radius of the circular track of the outer front wheel. It is variable not only with the car, but also with other factors discussed below.

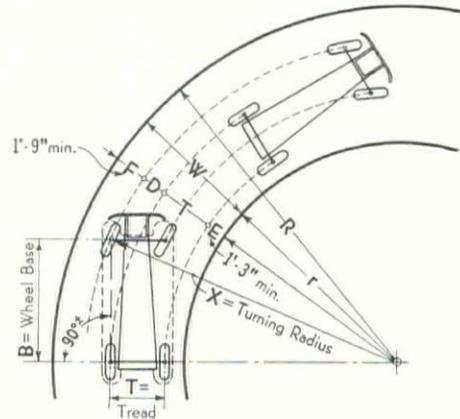
Inside and outside clearances, as used herein, are fixed dimensions which have been calculated to meet necessities of all types of cars. Lesser clearances are not advisable, as their use requires more caution than the average driver habitually employs.

CALCULATIONS

Use of the values of T, B and X given in Table I will result in driveways adequate for passenger cars most commonly used during the past six years (1931-36). A tread of 5'2" is not common to all cars of this period, nor is a wheelbase of 12'0" or a turning radius of 27'0". In general, the older the car, the shorter is the tread and the greater the turning radius. The values listed, however, will accommodate all cars. When desirable, exact dimensions of a particular car (obtainable from the manufacturer) may be substituted in the formulae in Table I; but this practice is not recommended unless conditions require it, since the resulting driveway may prove hazardous to other makes or models of cars.

Straight driveways: The minimum width of straight driveways should be calculated from the formula, $W = T + 2E$, or 7'8". Narrower drives are not recommended.

Landings: Straight portions of driveway interposed between two curved quadrants will permit a car to be brought nearly alongside a curb or step at an entrance. Theoretically a car cannot be brought exactly parallel to the curb without backing and moving forward again at least once. Actually, a landing 22'0" in length will permit driving close enough to the curb to prevent discomfort in alighting, without "jockeying." See Figure 3.



I. BASIC PRINCIPLES

Basic principles of driveway design may be applied geometrically by following the diagram above or by use of the formulae below. In either case, the turning radius, "X", may be any dimension not less than the minimum.

TABLE I - MINIMUM DIMENSIONS AND FORMULAE

T, B, and X vary with the make of car; the requirements of all makes for the past six years (1931-36) are met by the values given below.

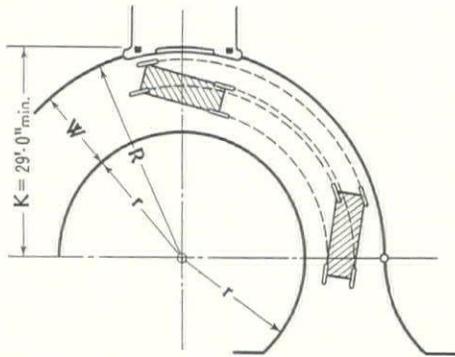
DIMENSIONS	FORMULAE
T = tread = 5'-2"	R = outside radius of drive = X + F
B = wheelbase = 12'-0"	D = divergence between front and rear wheels = $X - \sqrt{X^2 - B^2}$
* X = turning radius = 27'-0"	W = width of drive for a given radius = T + D + E + F
E = inside clearance = 1'-3"	r = inside radius of drive = R - W
F = outside clearance = 1'-9"	
Minimum landing = 22'-0"	

* Note: X may be any desired radius not less than the minimum

**TABLE II
MINIMUM STANDARD DIMENSIONS FOR CURVED DRIVEWAYS**

R Outer Radius	W Minimum Width	r Inner Radius
29'-0" to 30'-0"	11'-0"	18'-0" to 19'-0"
30'-0" to 31'-0"	10'-11"	19'-1" to 20'-1"
31'-0" to 32'-0"	10'-10"	20'-2" to 21'-2"
32'-0" to 33'-0"	10'-9"	21'-3" to 22'-3"
33'-0" to 34'-0"	10'-8"	22'-4" to 23'-4"
34'-0" to 35'-0"	10'-7"	23'-5" to 24'-5"
35'-0" to 36'-0"	10'-6"	24'-6" to 25'-6"
36'-0" to 37'-0"	10'-5"	25'-7" to 26'-7"
37'-0" to 38'-0"	10'-4"	26'-8" to 27'-8"
38'-0" to 39'-0"	10'-3"	27'-9" to 28'-9"
39'-0" to 41'-0"	10'-2"	28'-10" to 30'-10"
41'-0" to 43'-0"	10'-1"	30'-11" to 32'-11"
43'-0" to 45'-0"	10'-0"	33'-0" to 35'-0"
45'-0" to 47'-0"	9'-11"	35'-1" to 37'-1"
47'-0" to 49'-0"	9'-10"	37'-2" to 39'-2"
49'-0" to 51'-0"	9'-9"	39'-3" to 41'-3"
51'-0" to 54'-0"	9'-8"	41'-4" to 44'-4"
54'-0" to 57'-0"	9'-7"	44'-5" to 47'-5"
57'-0" to 61'-0"	9'-6"	47'-6" to 51'-6"
61'-0" to 65'-0"	9'-5"	51'-7" to 55'-7"
65'-0" to 70'-0"	9'-4"	55'-8" to 60'-8"
70'-0" to 75'-0"	9'-3"	60'-9" to 65'-9"
75'-0" to 82'-0"	9'-2"	65'-10" to 72'-10"
82'-0" to 89'-0"	9'-1"	72'-11" to 79'-11"
89'-0" to 99'-0"	9'-0"	80'-0" to 90'-0"
99'-0" to 111'-0"	8'-11"	90'-1" to 102'-1"
111'-0" to 126'-0"	8'-10"	102'-2" to 117'-2"
126'-0" to 147'-0"	8'-9"	117'-3" to 138'-3"
147'-0" to 176'-0"	8'-8"	138'-4" to 167'-4"
176'-0" to 219'-0"	8'-7"	167'-5" to 210'-5"
219'-0" to 300'-0"	8'-6"	210'-6" to 291'-6"

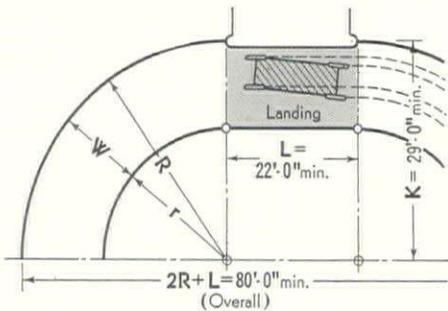
DRIVEWAYS ... Basic Principles & Design



2. CIRCULAR CURVES

MINIMUM VALUES: R=29'-0", W=11'-0", r=18'-0"

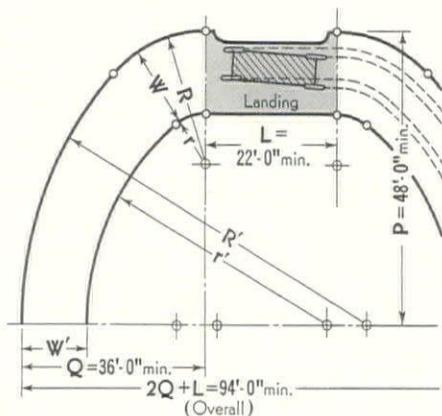
On a minimum circular curve, automobiles stop in a raking position. Radius of the flare from property line to curb should be the same as the inner radius of curve.



3. LANDINGS

MINIMUM VALUES: R=29'-0", W=11'-0", r=18'-0"

A straight portion, or "landing", at the entrance step will lessen the rake of the car. As the tangent in advance of the entrance is lengthened the angle of rake is lessened.



4. COMPOUND CURVES

MINIMUM VALUES

- P = 48'-0"
- Q = 36'-0"
- R = 30'-0"
- R' = 60'-0"
- W = 9'-6"
- W' = 11'-0"
- r = 19'-0"
- r' = 44'-4"

Compound curves of this type, with the short radius nearest landing, permit greater speed upon entering the drive, but require more manipulation of the steering wheel, and consequently a slower speed near the landing. Consult Table III.

Curved driveways: By substituting the values in Table I, col. 1, in the formulae in Table I, col. 2, the least practical outside radius for a curved drive is found to be 27'-0" plus 1'-9" or 28'-9". Similarly, the least practical width of a drive of 29'-0" outer radius is 11'-0"; the minimum inner radius, 18'-0".

The larger the "turning-radius," X, the more may riding comfort and speed be increased. Therefore, it is advisable to use curves having radii as large as practical considerations of site and economy permit. Data in Table II constitute a tabulation of the results of substituting varying values of X in the basic formulae. Any one of the three factors, R, W, or r, may govern. For instance: R (outer radius) may be determined by lot lines; W (width of drive) may be prescribed by the distance between two obstructions; r (inner radius) may be the radius of a circular flower bed.

Compound curves: Since ease of driving is dependent primarily on uniformity of curvature, and speed, on radius, a drive formed of circular curves of large radius is theoretically most nearly perfect. Practical considerations of site and expense, however, normally limit the radius. Hence, compound curves approach the maximum of riding ease compatible with practicality. Portions of the drive may be laid out at great radius and other portions at small radius. Relationships of these portions should be carefully studied. Shorter radii may be placed near the landings, where speed is reduced, or greater radii may be so placed when it is desirable to minimize the raking position of the car when stopped. Circumstances of each problem will determine its solution. Figure 4 shows the development and minimum dimensions of compound curves. Basic formulae are the same as for circular curves. Radii and widths of drive for quadrants of varying sizes are given in Table III.

Double driveways: Minimum safe clearance between two moving cars is 2'-0". To determine the total width of a double drive: (1) Establish the inner or outer radius of either lane; (2) determine the minimum width of that lane from Table II; (3) add the necessary clearance and obtain the inner or outer radius of the other lane; (4) from Table II determine the width of the second lane; and (5) add this to the width-plus-clearance already obtained. The result is the total width.

Circular and elliptical driveways, and turn-arounds, are discussed in T-SS "Circular Driveways, Back-arounds, Junctions" (Serial No. 46, May 1936).

TABLE III
DIMENSIONS OF COMPOUND DRIVEWAY QUADRANTS

(See Figures 4 and 7 for applications and reference letters. Dimensions are taken to the nearest inch.)

Rectangular Dimensions		Outer Radii		Widths of Driveway (From TABLE I)		Inner Radii	
P	Q	R	R'	W	W'	r	r'
48'-0"	36'-0"	30'-0"	60'-0"	11'-0"	9'-6"	19'-0"	44'-4"
50'-0"	37'-6"	31'-3"	62'-6"	10'-10"	9'-5"	20'-5"	47'-2"
52'-0"	39'-0"	32'-6"	65'-0"	10'-9"	9'-4"	21'-9"	49'-9"
54'-0"	40'-6"	33'-9"	67'-6"	10'-8"	9'-4"	23'-1"	52'-6"
56'-0"	42'-0"	35'-0"	70'-0"	10'-6"	9'-3"	24'-6"	55'-4"
58'-0"	43'-6"	36'-3"	72'-6"	10'-5"	9'-3"	25'-10"	58'-2"
60'-0"	45'-0"	37'-6"	75'-0"	10'-4"	9'-2"	27'-2"	60'-9"
62'-0"	46'-6"	38'-9"	77'-6"	10'-3"	9'-2"	28'-6"	63'-6"
64'-0"	48'-0"	40'-0"	80'-0"	10'-2"	9'-2"	29'-10"	66'-4"
66'-0"	49'-6"	41'-3"	82'-6"	10'-1"	9'-1"	31'-2"	68'-11"
68'-0"	51'-0"	42'-6"	85'-0"	10'-1"	9'-1"	32'-5"	71'-5"
70'-0"	52'-6"	43'-9"	87'-6"	10'-0"	9'-1"	33'-9"	74'-3"
72'-0"	54'-0"	45'-0"	90'-0"	9'-11"	9'-0"	35'-1"	76'-10"
74'-0"	55'-6"	46'-3"	92'-6"	9'-11"	9'-0"	36'-4"	79'-3"
76'-0"	57'-0"	47'-6"	95'-0"	9'-10"	9'-0"	37'-8"	82'-2"
78'-0"	58'-6"	48'-9"	97'-6"	9'-10"	9'-0"	38'-11"	84'-8"
80'-0"	60'-0"	50'-0"	100'-0"	9'-9"	8'-11"	40'-3"	87'-3"

Note: The values of r' in the above table were computed by means of the following general formula:

$$r' = \frac{(P-W)^2 - (Q-W')^2 - 2r[(P-W) - (Q-W')]}{2[(Q-W') - r]} + (Q-W')$$

DRIVEWAYS—Circles, Back-Arounds, Junctions

PURPOSE

This sheet develops to a greater degree the information contained in T-SS "Driveways—Basic Principles and Design" (Serial No. 45—May, 1936). Data and tables there shown should be used in conjunction with this sheet.

CALCULATIONS

As with curved and straight driveways, any other form of drive may be calculated for a particular car by means of formulae. But use of tabulated data will eliminate tedious mathematics and provide driveways accommodating most cars.

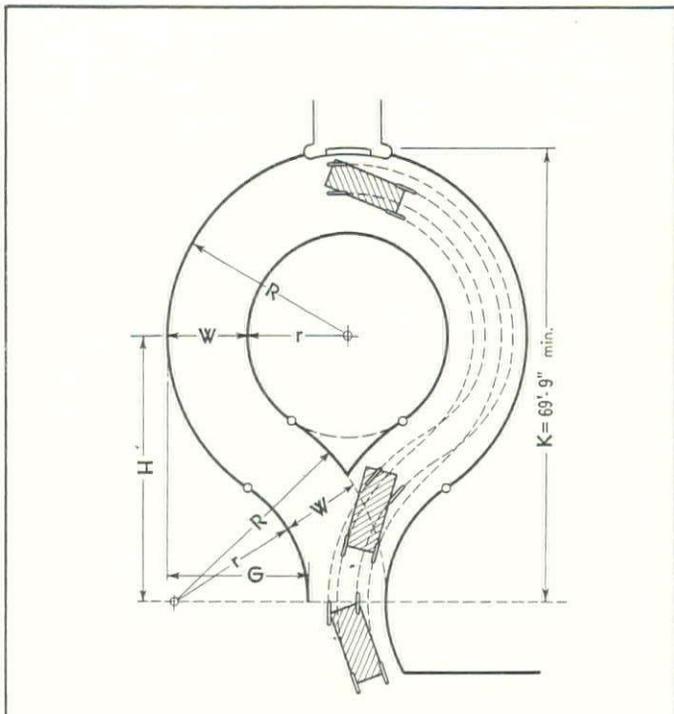
Circular Drives are merely developments of the simple curved driveway, the radius of the reverse curve at the junction being the same as the radius of the circle. A landing may be inserted. Formulae for location of the center are given in conjunction with Figure 5.

Easings are straight portions inserted at points where the curvature is reversed. Since they are diagonal to axes, comparatively long easings may be used without unduly increasing overall width or length of the driveway area. A tabulation of overall lengths "K" (from street to landing) is given in conjunction with Figure 6.

Elliptical Drives formed of compound curves, shown in Figure 7, may be laid out similarly to the compound curves illustrated in Figure 4. Driveways of this type provide a maximum of riding comfort and require the greatest area.

Back-abouts of many types may be developed from the minimum requirements shown in Figure 8. Where space is at a premium, the garage doors may be made the full width of the curved portion of the drive, and the garage brought forward a distance equal to the wheelbase (B) of the car. If the car is to be backed into the garage, the stem of the "Y" must be extended a distance equal to B.

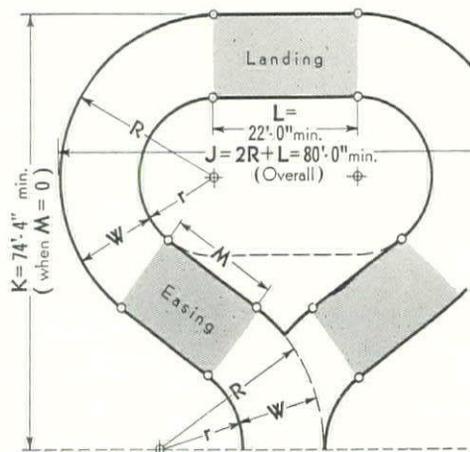
Junctions of curved and straight drives are shown in Figures 9 and 10. Figure 9 occupies the minimum of space, and Figure 10 permits of much greater ease of driving. The space apparently wasted in Figure 9, where the outside arc of the curved drive intersects the otherwise straight drive, is required to permit cars to proceed in either direction. When conditions other than those shown are encountered, principles illustrated in Figure 8 (back-abouts) and in Figures 9 and 10 can be combined to solve any problem.



5. CIRCULAR DRIVEWAYS

MINIMUM VALUES: $R = 29'-0''$, $W = 11'-0''$, $r = 18'-0''$
FORMULAE: $H = \sqrt{G(2R + 2r - G)}$, in which $G = R - \frac{1}{2}W$

The minimum circular turn-around requires great manipulation of the steering wheel where curves are reversed. Nevertheless, uniform width is permissible even at this point. Cars stop in a raking position.



6. LANDINGS and EASINGS

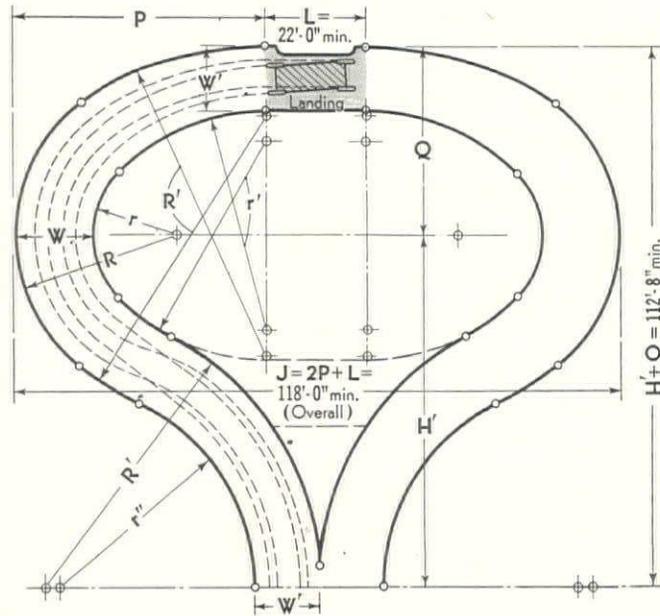
MINIMUM VALUES

$R = 29'-0''$
 $r = 18'-0''$
 $W = 11'-0''$

K	M
74'-4"	0
75'-0"	8'-0"
76'-0"	12'-1"
77'-0"	15'-10"
78'-0"	18'-8"
79'-0"	21'-2"
80'-0"	23'-5"

Easings, or tangents at points of reversal of curvature, make driving easier. Note that a great increase in length of the tangent requires only a small increase in overall distance from entrance to curb. Use of a landing lessens the rake of the car upon stopping.

DRIVEWAYS—Circles, Back-Arounds, Junctions



7. ELLIPTICAL DRIVEWAYS

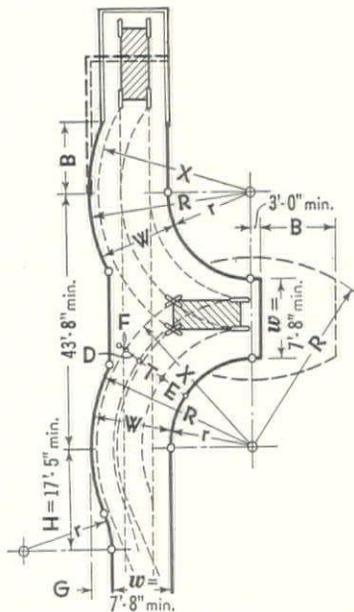
FORMULAE:

$H' = \sqrt{G(2R' + 2r' - G)} - (W' + r' - Q)$ in which $G = r' + \frac{1}{2}(L + W')$
 $r'' = \frac{g^2 + h^2}{2g} - R'$ in which $g = R' + \frac{1}{2}(L - W')$, $h = H' + R' - Q$

MINIMUM VALUES:

P = 48'-0"	R' = 60'-0"	r = 19'-0"
Q = 36'-0"	W' = 9'-6"	r' = 44'-4"
R = 30'-0"	W = 11'-0"	r'' = 49'-7"

Ellipses formed of compound curves permit the maximum of speed compatible with both riding and driving ease. In the type shown the shorter radii occur away from the landing, which still further reduces the rake of the car upon stopping. For dimensions greater than the minimum consult Table III.



8. BACK-AROUNDS

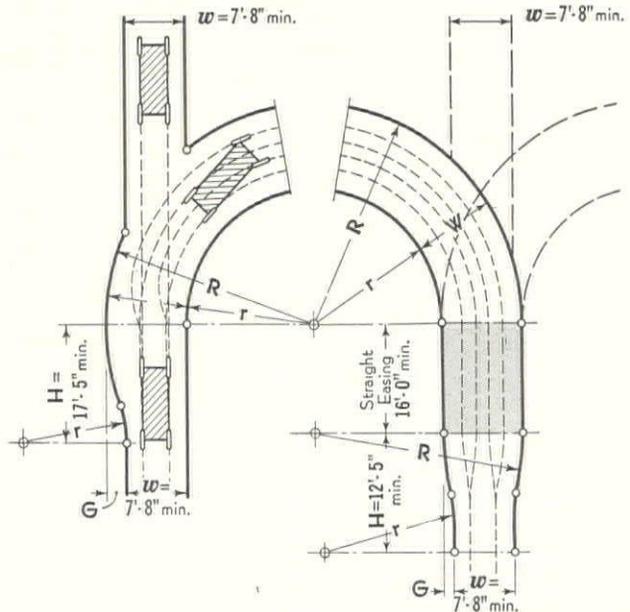
Minimum "Y" back-around is based upon the same principles as curved drives. When the car enters the garage in forward gear, the stem of the Y may be of the minimum dimensions shown. If the car enters the garage in reverse, the stem must be extended as shown dotted.

**FOR FIG. 8, 9 & 10
 FORMULA:**

$H = \sqrt{G(2R + 2r - G)}$

MINIMUM VALUES

X = 27'-0"
B = 12'-0"
R = 29'-0"
r = 18'-0"
W = 11'-0"
w = 7'-8"

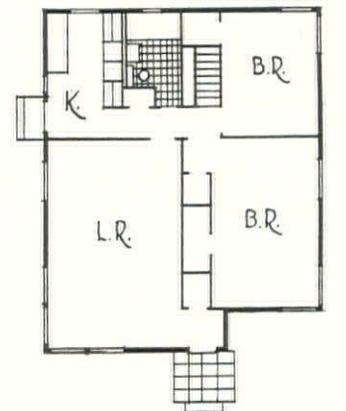
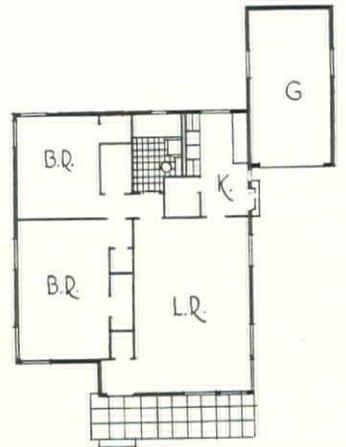
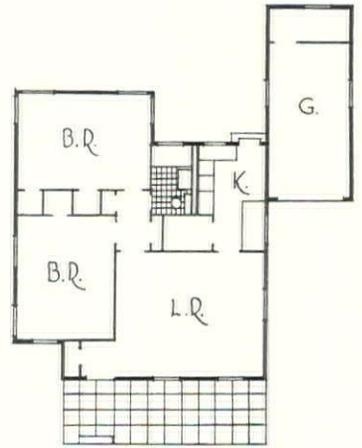
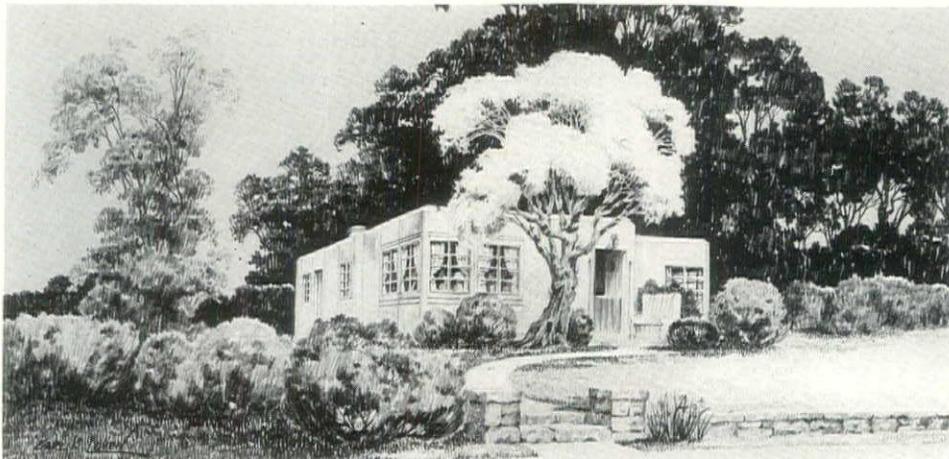
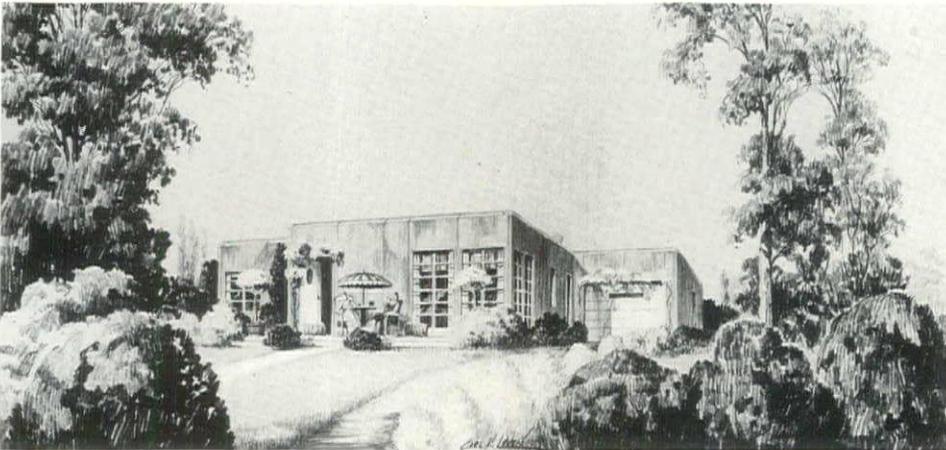
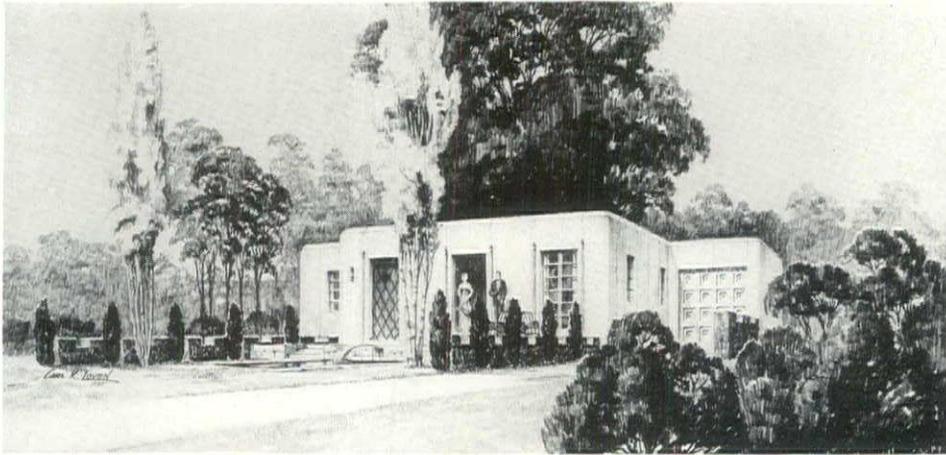


9. JUNCTIONS 10.

Alternate methods of designing necessary easings at junctions of straight and curved driveways. Figure 9 shows minimum requirements; Figure 10 shows a method which provides for greater speed, ease of driving, and riding comfort. Principles illustrated in Figure 8, in combination with either Figure 9 or 10, will solve any problems commonly encountered in designing junctions.

TECHNIQUES

METHODS • MATERIALS • RESEARCH • PRACTICES

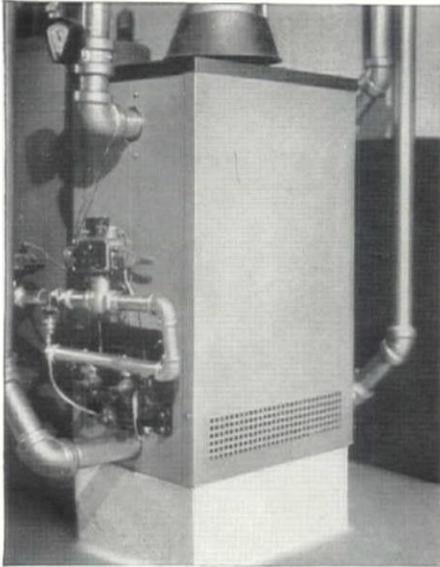


NATIONAL HOUSES

Merchandising is the toughest nut to crack in the prefabricated house field. No exception is the new all steel house developed by William Van Alen, architect of the Chrysler Building, for National Houses, Inc. According to B. E. Moses, the main figure behind National Houses, full plans of sales and display will soon be released. It is planned to sell the building units through local dealers who will develop their own assembling force. It is also planned that local architects will design the houses, using the standard units which will be

shipped to the dealers from eight manufacturing plants. While at present the smallest house costs about \$4,000, each dealer will figure the cost of the individually designed house on the basis of cost of standard parts, plus his and the company's profit, plus cost of local labor. At any rate, Mr. Moses will have several new wrinkles to sell. Standard steel panels are two feet and four feet in width and nine feet high, including doors, windows, corners, and plain units for the frame and outer facing of the building. Structural clamps rigidly hold

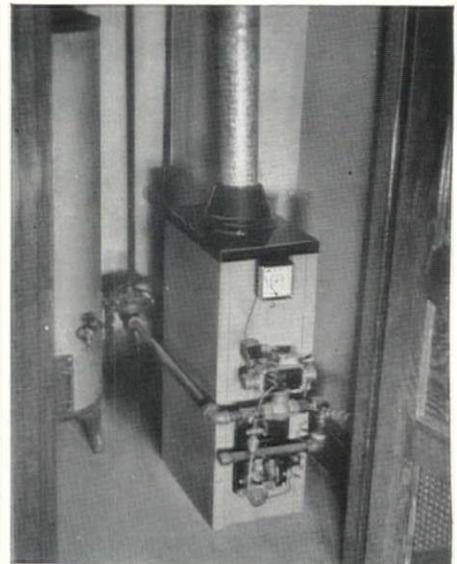
the panels together so that no other framing is needed. The houses may be planned for individual needs with no restriction on number of rooms and up to four stories high. The plans of the houses must, however, be designed in multiples of two feet. Two other unusual features of this house include window frames stamped directly into the steel panels, and the exterior paint developed by Mr. Van Alen in co-operation with Du Pont engineers. Sprayed on, it gives the appearance of finely grained stucco.



● This is one of the twelve 2-GA-6 Ideal Gas Fired Boilers installed in a new row of 6-room houses at Bethesda, Md. A view of the houses is shown below.



● One of the eleven compact 2-GA-6 "Empire" Ideal Gas Fired Boilers installed in a row of homes at Washington, D. C. Below is a view of the homes.



● Heating and hot water equipment installed in a closet. One of the 1-GA-6 Ideal Gas-Fired Boilers in a two-family Washington, D. C. home shown below.



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FINISHING MATERIALS

SMOOTH-FINISH INSULATING BOARD

The "hairy" or coarse textured surface characteristic of most insulating boards has been eliminated in a new smooth-finish board recently developed. The finish is obtained by an exclusive surface treatment which is said to retain the full insulating value of the board. The pleasing textures of the new board and the range of colors open up a broad field for its use as a decorative interior treatment as well as protection against heat and cold. Made in five standard colors, this new board is easy to apply. Use of a special adhesive adds to speed of installation, and also eliminates the possibility of hammer marks. It is available in standard size boards, 4' x 8' to 12', in planks up to 12" wide, and in tile form for ceiling decoration. Known as Temlok De Luxe, the board is a product of Armstrong Cork Products Co., Lancaster, Pa. 617M

NEW FLAT WALL FINISH

A new ready-mixed flat wall paint, known as DuPont Casein-Lithopone flat wall finish, has been introduced recently. It has been designed to fill the gap between non-washable cold water paints and the more expensive flat wall paints. This new product, announced by the Fabrics & Finishes Department of E. I. DuPont de Nemours & Co., Wilmington, Del., is said to dry in two hours and to give a dull, washable coating. One coat is said to be generally sufficient for walls that have been previously painted. The claim is also made that the paint may be applied over fresh plaster. White and nine pastel shades are available. 618M

STRUCTURE

NEW LIGHT-DUTY FREIGHT ELEVATOR

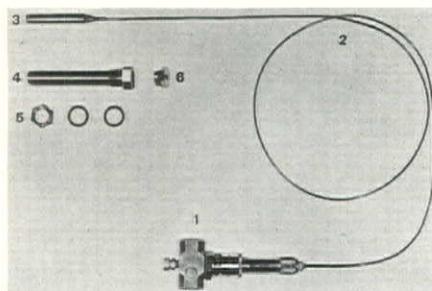
A new external geared traction elevator machine for light freight duty, which is of different design from previous machines used for this purpose, has recently been placed on the market. Features of the machine include a large diameter extended worm shaft which also carries the motor armature and brake pulley. This arrangement is said to give most accurate alignment. The worm is formed in one piece with the worm shaft. Ball bearings of ample capacity carry the worm shaft, take the end thrust and maintain accurate adjustment between worm and gear. The external gear is of semi-steel, made in

one piece with the driving sheave, mounted directly on the machine beams. Self-aligning pressure lubricated roller bearings are used on the pinion shaft and sheave shaft bearings. This is a new development of the Otis Elevator Company, New York. 619M

CASEMENT WINDOW HINGE

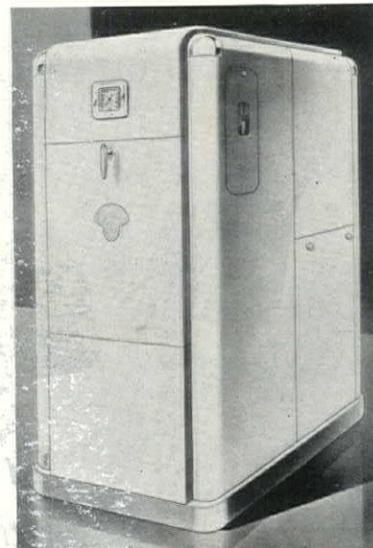
A new line of hinges for wood casement windows, designed to extend the sash 4" away from the frame when the casement is opened, has recently been introduced. The object of this extension is to permit room for cleaning the outside surface of the glass from the inside of the room as easily as the inside is cleaned. Another advantage claimed is that when the window is opened in the summer and the greatest amount of ventilation is desired, the sash acts as a baffle for breezes, deflecting this air into the room on both sides of the window. The hinge is made of steel and is designed to reinforce the corners of the sash. It is of the loose pin-type with bronze bushings. It is a new product of The Casement Hardware Company, Chicago. 620M

HEATING



AUTOMATIC STEAM CONTROL VALVE

The Yarway automatic steam control valve is a new unit designed for connection to the outlet or condensate end of steam heating coils in water heaters and in various types of industrial process equipment in which close regulation of temperature is required. When so connected, this valve is said to eliminate steam regulators and steam traps, and frequently does away with pressure reducing valves. The valve is of throttling type, operated by thermostatic element of bulb and bellows design. Valve body is made of cold rolled steel, disc and seat of stainless steel, stem of tobin bronze and bonnet of brass. A product of Yarnall-Waring Company, Chestnut Hill, Philadelphia, Pa. 621M

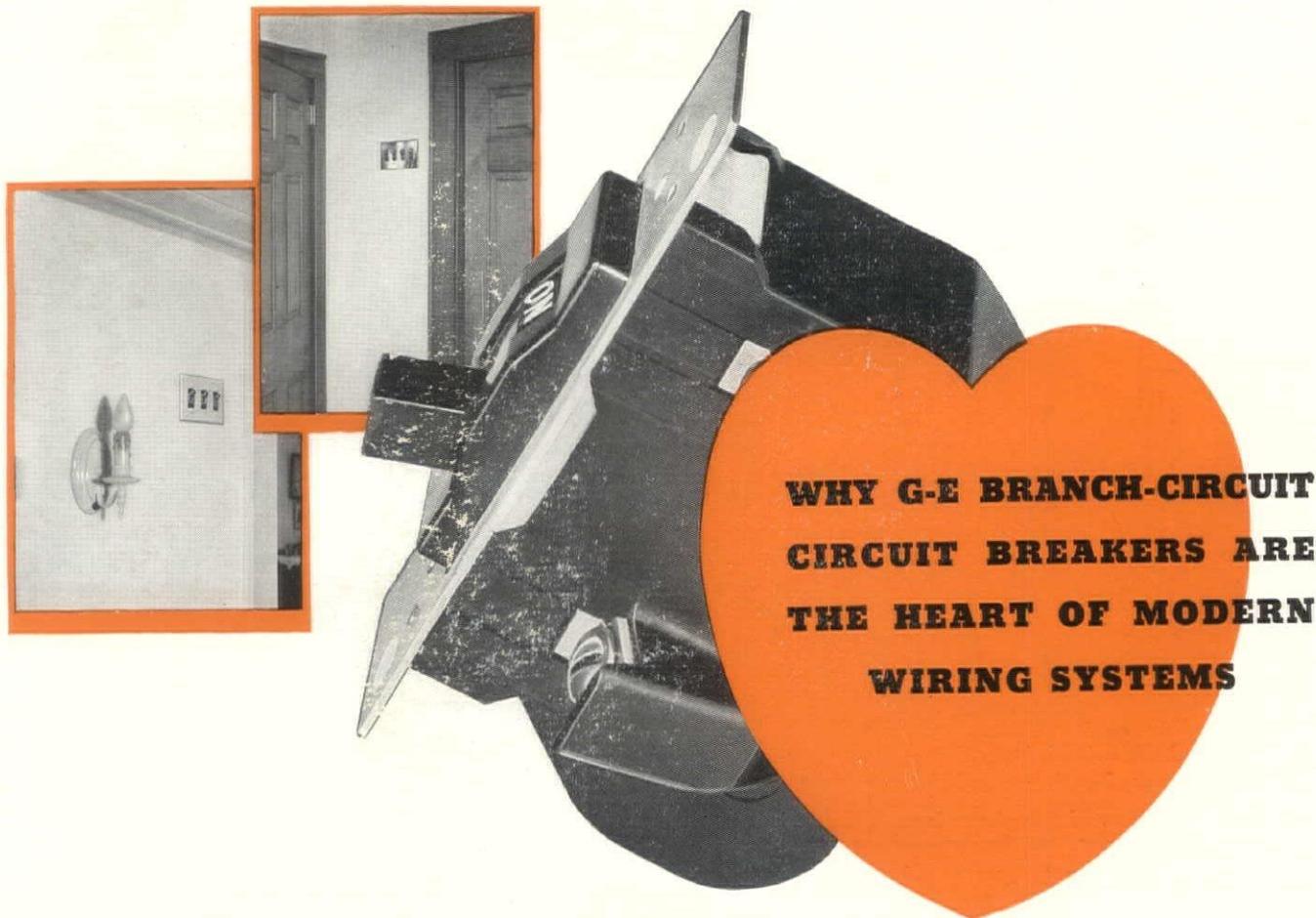


OIL BURNING BOILER

Among the features claimed for a new boiler unit are: New jacket design reflecting the modern trend of styling. Complete enclosure of the oil burner within the jacket. Complete enclosure of all oil burner controls (not furnished with boiler) within the jacket including low water cutoff. The Tank-saver, an instantaneous domestic submerged hot water coil that provides year-round hot water supply without a storage tank. Other features include the Combustrol, draft control, Thermalizer, gas control, safety door, large combustion chamber, small diameter tubes, etc. This new "streamline-styled" 1936 model of the Oil-Eighty Automatic Boiler is made by Fitzgibbons Boiler Company, Inc., New York. 622M

PULVERIZED COAL HEATING UNIT

Pulverized fuel, which has been used for some time in large commercial heating systems, can now be used in domestic plants by the introduction of the Gaskoal system of heating. The boiler of this system uses pulverized coal. It is fed into the combustion chamber from the top where it burns in suspension. Ignition is by a gas flame which is controlled automatically, as is the operation of the entire plant. Pulverized coal, which is a commercial product, is delivered into a closed storage bin or tank. From here it is blown into the combustion chamber as required. Many advantages are claimed for this method of burning coal; automatic firing, more complete combustion and a small ash content. Gaskoal Corporation, Chicago, is the manufacturer of this new heating system. 623M



**WHY G-E BRANCH-CIRCUIT
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You will be most interested in the convenience that their use offers your clients. Because they have the neat outward appearance of flush Tumbler Switches, they can be placed in living rooms, kitchens, bedrooms — and their appearance is similar to that of the neat appearing Tumbler Switches.

When a short circuit or overload occurs, service in that particular circuit is resumed after the trouble has been removed, by simply flipping the breaker. They can be placed in accessible spots about the house

near the circuit that they protect. Thus, inconvenient changing of fuses in branch circuits is eliminated. Home owners will appreciate this step-saving feature which is another aid to good housekeeping.

As well as convenience, mark these additional advantages of using G-E Branch-circuit Circuit Breakers:

They offer safe and positive protection. Factory calibration and sealing practically eliminates tampering. They insure positive short circuit and accurate overload protection for branch circuits.

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These breakers are designed for all conventional wiring systems and are specified in the new G-E Radial Wiring System.

They have satisfactorily passed all tests of, and are listed by, the Underwriters' Laboratories, Inc.

For further information on their convenience - appearance - safety and control, refer to "Sweet's Architectural Catalog" and "American Architect Time-Saver Specifications", or write Section CDW-905, Appliance and Merchandise Department, General Electric Company, Bridgeport, Connecticut.

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WIRING DEVICES

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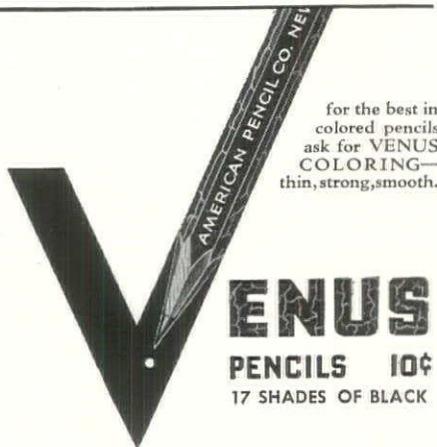
“I and 3,079,621 of my faithful listeners — long sufferers from Scratchitus and everything else — certainly owe a debt of gratitude to Venus Pencils.

“I use, I approve, I recommend these smooth-writing Venus Pencils. I tell my audience: ‘You can't get ahead without being freed of Scratchitus (gritty pencils).’

“I tried out every pencil, finding Venus Pencils give you a Lift. They make you sing while you work—and give you Young Ideas.

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* This voluntary, ecstatic testimonial, we suppose, is a publicity gag for “The Voice of Experiment,” but it tells why Venus Pencils have won First Place—they're smooth!



• This advertisement appears
in Collier's and Time.

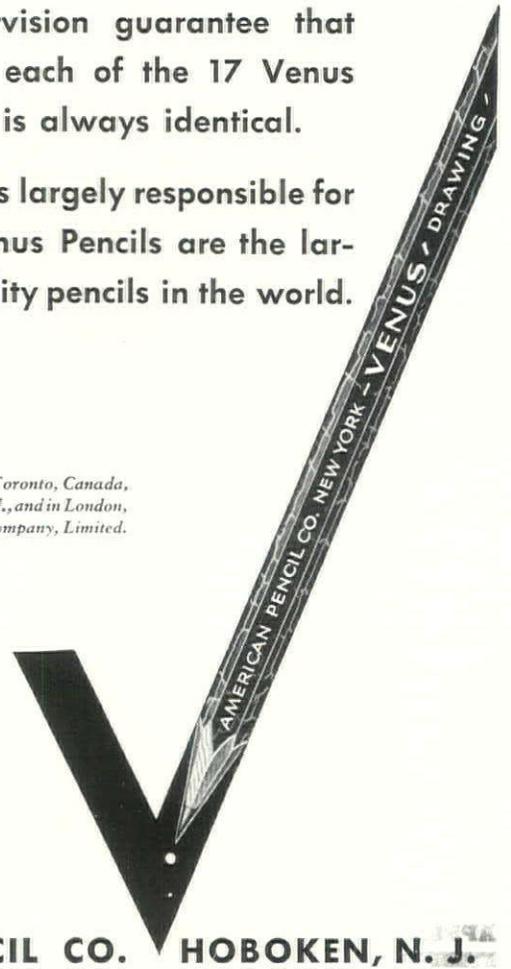
Naturally you assume the smoothness of Venus Pencils—that we stress as important in this advertisement to the general public.

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THE UNIT VENTILATOR WITH THE "WINNING COMBINATION"



CONVECTION HEATER

A new electric convection heater which utilizes the natural rise of warm air for circulation, has been announced. The element used is of cast-aluminum construction. Heating is done by means of a calrod, around which the aluminum is poured. Shrinking of the metal in cooling causes the calrod to become an integral part of the heating element and eliminates all hot wires and dead air space. This self-contained convector is a $\frac{3}{4}$ kw. unit and measures $4\frac{1}{2}$ " wide, $9\frac{1}{2}$ " long and 16" high. It is completely insulated throughout. A large variety of finishes is available. Designated as Electromode Convection Heater, the new unit is manufactured by The Electric Air Heater Company, Division of The American Foundry Equipment Co., Mishawaka, Ind. 624M

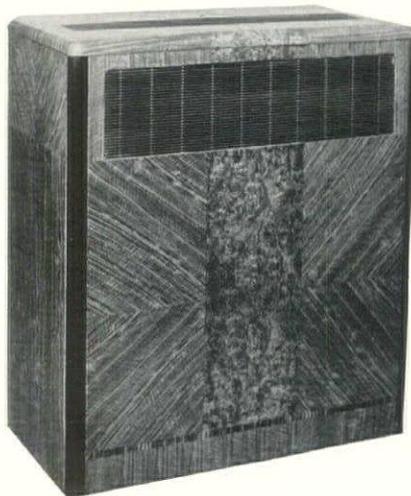
AUTOMATIC COAL BURNER

To meet the needs of the modern home for automatic heating equipment using coal, Kelvinator Corporation, Detroit, has entered the field of the automatic coal burner with the introduction of five models. These coal burners are of mechanical type providing heating service for all types of existing heating plants. Two small models are designed for small and medium-sized residences and three larger models for larger residences, multiple dwellings, small apartments, etc. Using the underfeeding principle, coal is brought in under the fuel bed and preheated, thus liberating the volatile gases contained in the fuel, which are distilled off and, passing through the fire bed, are completely ignited, eliminating smoke. Air is delivered to the fuel bed by means of specially designed tuyere block. Transmission of the burner is of a special agitated type, equipped with five speeds and neutral to permit feeding according to weather needs. 625M

NEW PRESSURE-TYPE OIL BURNER MODELS

Four MW Emancipator pressure burner models have been added recently to the line of oil burners manufactured by the Heater Division of Motor Wheel Corp., Lansing, Mich. In addition to this increase in the number of sizes and capacities, all units have been extensively redesigned from an appearance as well as a mechanical standpoint. The present line-up includes models capable of burning from 1.35 to 8 gallons of oil per hour with ratings up to 3000 square feet of steam radiation and 4800 square feet of hot water radiation. In addition to the new burners, a pear-shaped prefabricated combustion chamber has been developed. 626M

AIR CONDITIONING



SUMMER AIR CONDITIONER

A self-contained portable summer air conditioner for individual rooms, offices, small shops and homes, has recently been placed on the market. The unit, which utilizes an air-cooled condenser and has a capacity of approximately $\frac{3}{4}$ of a ton of refrigeration, has a steel casing finished in dark walnut and is 40" high, 36" wide and 18" deep. Location beneath a window, through which, by means of a duct connection, outside air is brought in for condensing purposes and for ventilation, is required. Aside from this an electrical connection from a standard floor or baseboard outlet is all that is necessary. A centrifugal type fan circulates cooled dehumidified air at the rate of 250 cfm. A single unit has ample capacity for spaces from 1500 to 3000 cubic feet, according to its manufacturer, Carrier Engineering Corporation, Newark, N. J. 627M



PORTABLE AIR CONDITIONER

Immediate freshening of room air whenever smoke or odors accumulate, increased cooling capacity, and the optional functions of heating and humidifying in winter have been incorporated in a new portable air conditioner. Room air enters through a grille in the end of the cabinet and is conditioned and discharged out of the top. Outside air, drawn through the rear duct adaptor, is added to the room to keep it fresh and also circulated across the refrigerating unit and discharged outdoors. The new air-freshening device consists of a hand-operated damper which can be opened to "pump out" a room. Outside air is cleaned by a replaceable filter in the duct connection, while room air is cleaned by a second filter directly under the return air grille. Model BA-100, is made by York Ice Machinery Corp, York, Pa. The unit is a companion to the company's Model BA-75 portable conditioner. 628M

AIR CIRCULATORS

A new line of 24-inch and 30-inch air circulators in one and two-speed models was announced recently. These fans are designed for cooling large areas requiring high velocity air circulation, such as restaurants, stores, shops, churches, factories, etc. The A.C. fans have an induction type fully enclosed, streamline design motor, and the D.C. fans have a fully enclosed motor, brush and commutator type. The fans have four formed - steel chromium - plated blades and can be furnished with four styles of baked black enamel mountings—ceiling, wall bracket, counter column, and adjustable floor column. The 24-inch single-speed fan has an air delivery of 3600 cfm with 185 watts input. The 30-inch two-speed fan has an air delivery of 6000 cfm on high speed with 355 watts input. They are made by The Emerson Electric Mfg. Co., St. Louis. 629M



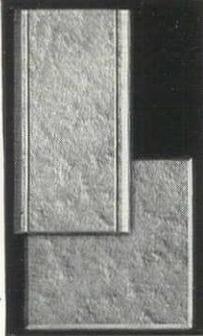
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THE SMALL
HOUSE**

*—Here's First Aid
to Modest Budgets*

"Give me," said a harrassed designer of small houses, "a material that has all the durability of conventional interior walls—at much less expense. Let this same material provide effective insulation and aid the functioning of air conditioning equipment. Let it shut out unwelcome noise. And, lastly, let it be a beautiful material—interesting in texture and adapted to any type of architectural treatment."

Yes, there IS such a material—Nu-Wood. This multiple-purpose wall and ceiling covering eliminates the high original and maintenance costs of old-fashioned materials. It insulates effectively, and quiets noise. Its texture and colors are matched by those of no other material, making possible treatments of great distinction and richness. And Nu-Wood, with all its virtues, is astonishingly low in price . . . suited to modest pocketbooks.

There is nothing like Nu-Wood on the market today. Complete information and valuable data for your files are yours for the asking. Just mail the coupon!



The unique texture of Nu-Wood enables you to create effects of great richness as shown in the bedroom above

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I want to know more about Nu-Wood. Please send me, without obligation on my part, information and illustrations.

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City State

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satisfactory"



"We have been in our offices for almost a year and there is no apparent wear in the Sloane-Blabon Linoleum. In fact, it is highly satisfactory."

The Linen Thread Co., Inc.



Illustrated is the main office of the Linen Thread Company situated in the Lincoln Building, New York . . . one of the many recent Sloane-Blabon installations. The specifications for this job were — durability, resiliency, attractive colors. Sloane-Blabon met them all. The net result is an exceptionally good-looking floor . . . a floor that can take the hard wear of

a busy office. Linoleum is the modern way to add color and relieve both foot and eye tension.

We shall be glad to send you a list of other Sloane-Blabon installations, together with samples and our new Linoleum Handbook. Write W. & J. Sloane, Selling Agents Division, 295 Fifth Avenue, New York, N. Y.

SLOANE-BLABON LINOLEUM

Check Oil Burners on These 7 Points

THEN YOU'LL SPECIFY WILLIAMS OIL-O-MATIC

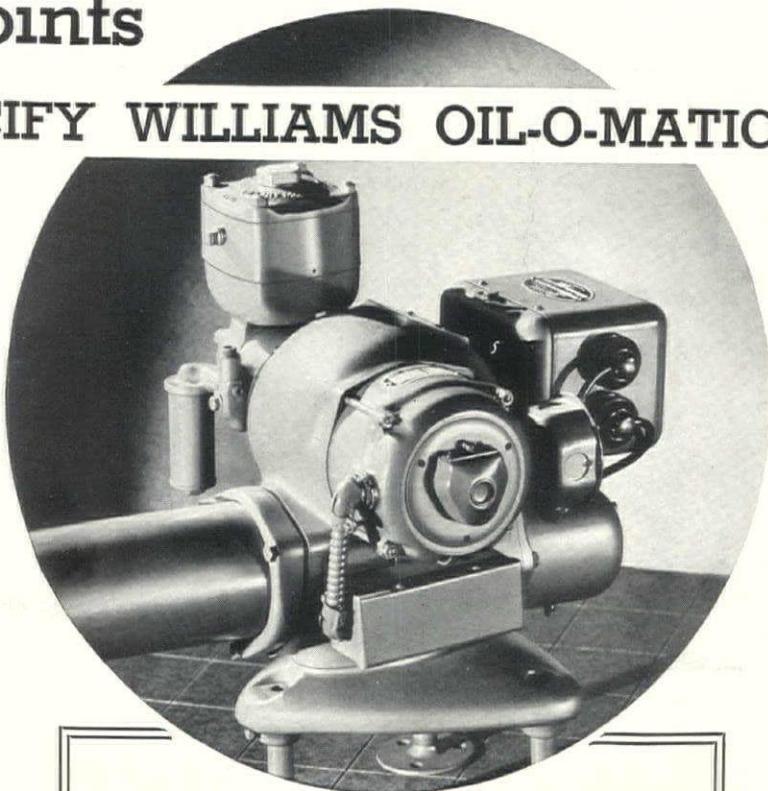
THERE is a reason why so many architects and heating engineers specify Oil-O-Matic.

Oil-O-Matic is the world's fastest selling oil burner. It has been the leader in its line for seventeen years, with a record of two hundred thousand installations.

Oil-O-Matic is made by Williams Oil-O-Matic Heating Corporation, the world's largest specialists in temperature control.

Oil-O-Matic is the only oil burner which checks on all the 7 important "musts" for oil burners.

Oil-O-Matic is built in five different sizes to meet the widest range of heating requirements. For new construction it is provided in complete boiler-burner and furnace-burner units. For remodeling jobs it can be quickly installed in any furnace or boiler; steam, vapor, hot water or hot air. For useful and precise data for your files, mail the Architect's coupon below.



Oil-O-Matic and only Oil-O-Matic Meets All Seven Requirements!

- ✓ **1** Does it atomize at *low pressure*, insuring quiet and complete combustion and long life?
- ✓ **2** Has it *projected flame* burning in mid-air away from the burner, with all mechanism outside the combustion chamber away from the heat?
- ✓ **3** Has it *diffusor* to insure, with any oil, a perfect blending of oil and air, producing a steady, unwavering flame?
- ✓ **4** Has it positively operated automatic safety shut-off valve?
- ✓ **5** Will it burn the economical, heavier, low-priced fuel oils?
- ✓ **6** Has it metering pump feeding unvarying quantity of oil regardless of viscosity or temperature?
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The Williams Oil-O-Matic Water Heater is made in three sizes—home, heavy duty, and commercial. Horizontal in design for fuel economy. Complete unit includes water reservoir, combustion chamber, burner, and full automatic control.

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WITH A NORGE FINE-AIR CONDITIONING FURNACE UNIT

In the home of today—and certainly the home of tomorrow—more is expected of a heating plant than heat. Properly conditioned air is not a future desire, it is a present demand.

For the home selling for from \$5,000 to \$50,000 Norge offers the *complete* solution to the problem of air conditioning. The Norge Fine-Air Conditioning Furnace Unit warms, filters, humidifies, circulates the air in every room in the house, provides plenty of hot water. It may be used to circulate filtered air in Summer. Its heating efficiency is over 80% as compared with 20% to 45% in the old-fashioned heating plant which does nothing but provide heat.

The more you study the Norge Fine-Air Furnace, from the standpoint of engineering and construction, the stronger will be your conviction that it is truly the Winter air-conditioning system of the future. And it may easily be supplemented with Norge cooling equipment if lower Summer temperatures are desired than are effected by the forced circulation of air.

For more complete information about Norge heating and air conditioning, get in touch with the Norge distributor in your vicinity or write direct to us.

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Distinctive . . . firesafe . . . economical . . . weather-defying
 . . . the new architectural concrete Jones-Dabney Company
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 architects and engineers; J. D. Jennings Co., contractor.

Concrete gives the designer a welcome new freedom

Architectural concrete gives plane surfaces without conspicuous joints or markings . . . gives curved surfaces that *melt* into surrounding areas . . . aids the architect at every turn in developing modern designs.

On the other hand, concrete can be moulded into the most intricate sculptured detail at low cost . . . forms irregular surfaces without waste . . . gives the designer a wide choice of pleasing textures: smooth (plywood or fiberboard forms); grain marked (unfinished or dressed lumber forms); rough textures with exposed aggregates; dash-coat or trowelled stucco.

Among the scores of recent architectural concrete schools, churches, factories, commercial buildings and

Architectural Concrete

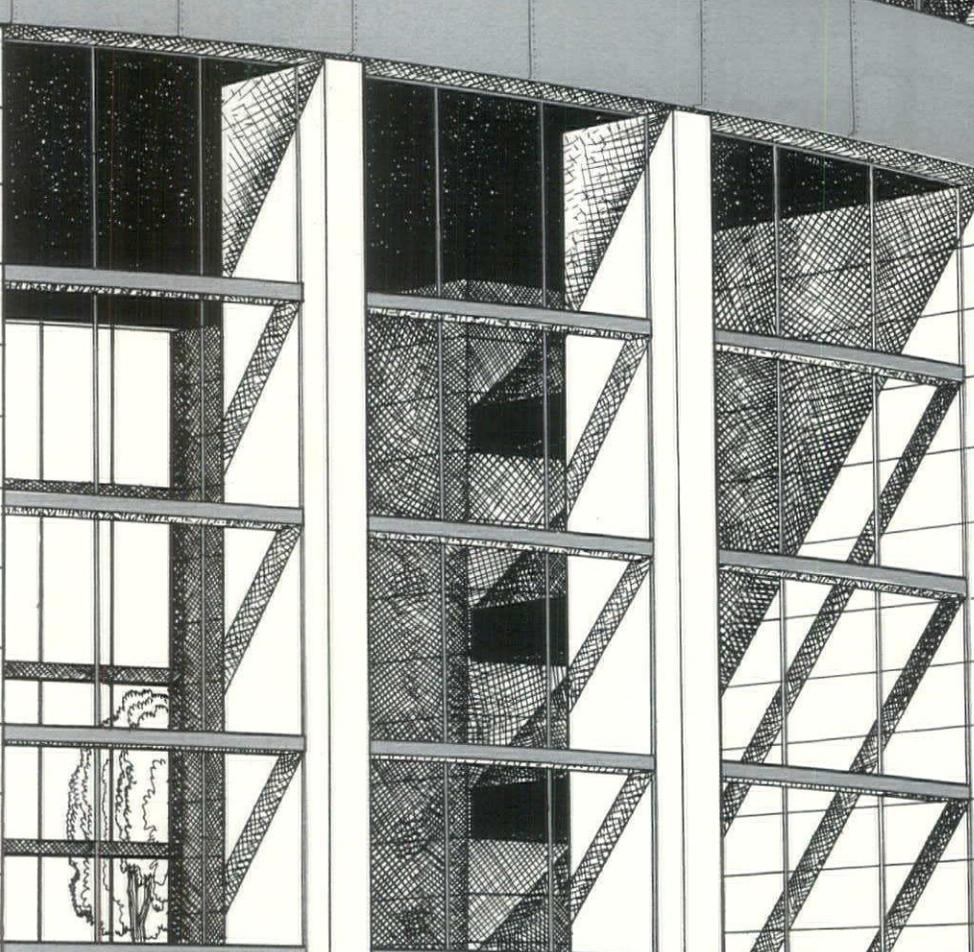
other structures, you'll find every architectural type. Some of the most notable of these buildings are being featured in national advertising in *Fortune* and *Business Week* throughout 1936.

To help you design in concrete, let us send Information Sheets covering specifications, construction details and textures.

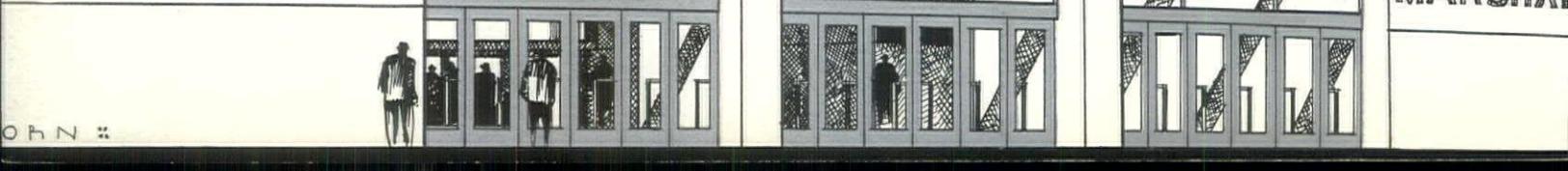
PORTLAND CEMENT ASSOCIATION	
Dept. A5-2, 33 W. Grand Ave., Chicago, Ill.	
Please send <input type="checkbox"/> Architectural Concrete Information Sheets 1 to 12;	
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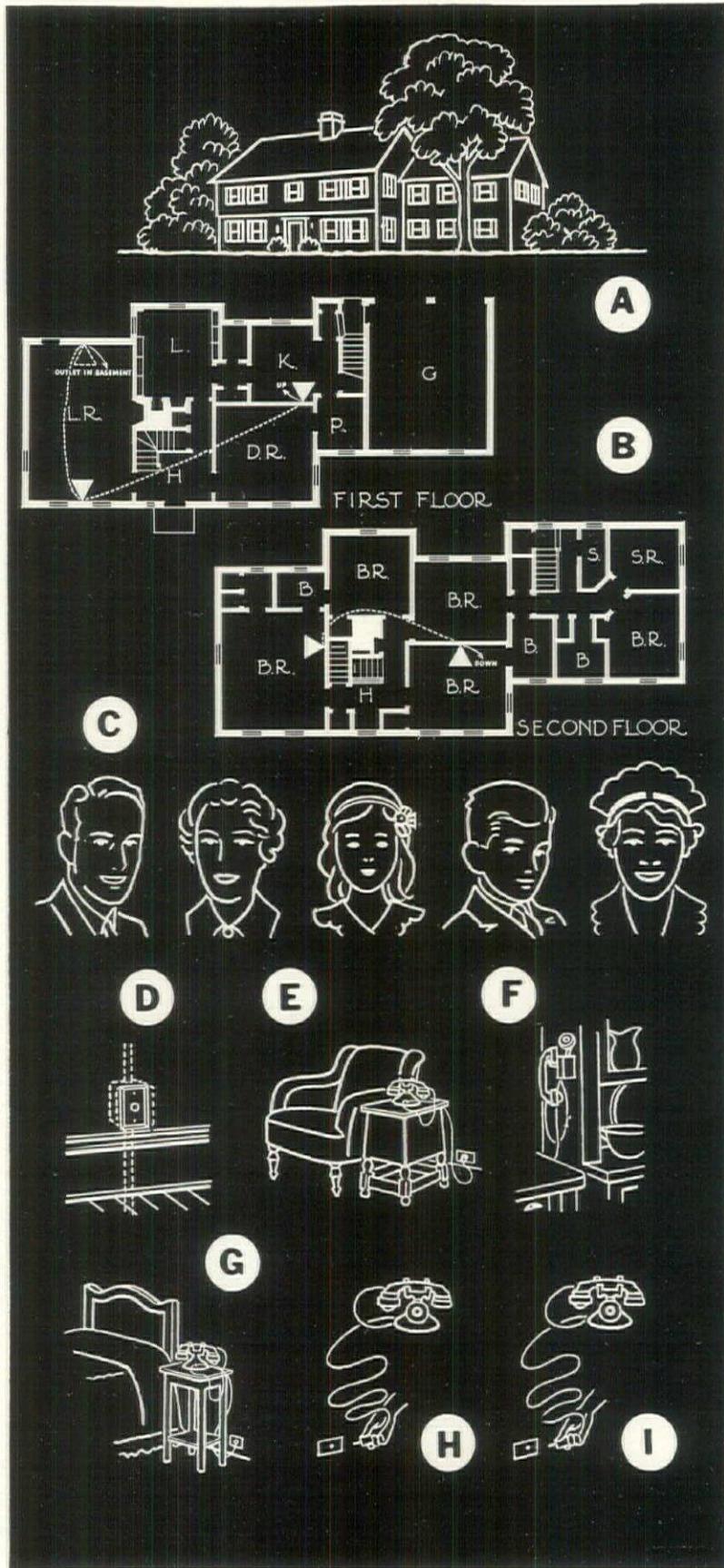
SOMETHING LARGER THAN SIZE

A CONCEPT is without dimension. It is exactly as large as it is true. A concept may be as great, and as lasting, in minuscule as in monument ★ There is reason to suspect that the future will measure our modern architectural concepts by the intelligence of our use of today's materials, rather than by the artisanship of our adaptation of the massy materials of the ancients to modern building ★ Alcoa Aluminum is of today and for the future ★ Which is to say that its infinite variety of appearance gives full expression to the modern tempo, and that its durability and nobility are certain hostage to the future. The structural sufficiency and versatility of Alcoa Aluminum goes without saying ★ We forego actually labelling the building illustrated in order to stress the obvious fact that its real distinction is distinction. Aluminum Company of America, 2195 Gulf Building, Pittsburgh, Pennsylvania.



ALCOA • ALUMINUM

PROBLEM No. 1



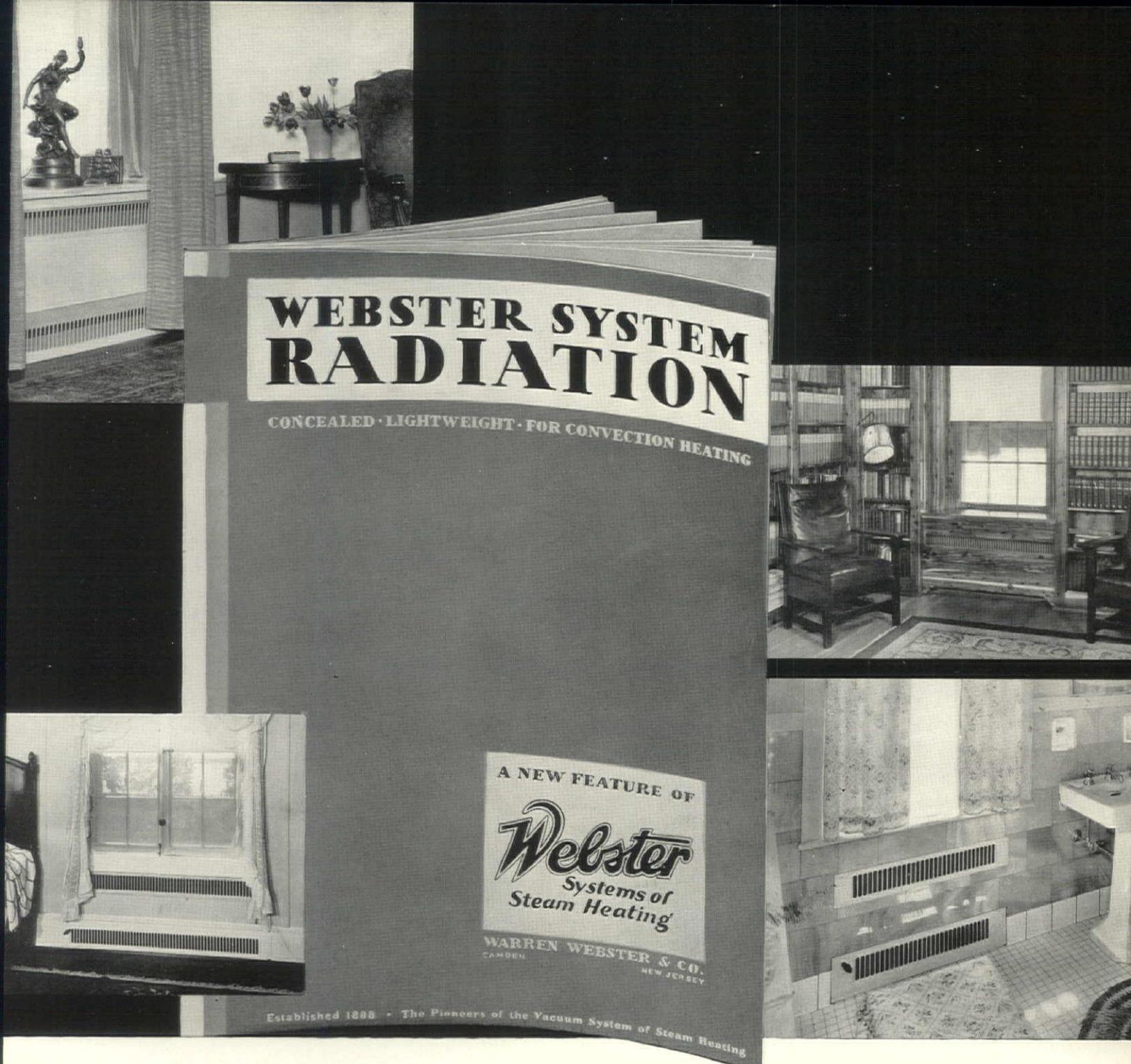
- A** This is the house that Jackson will build.
- B** These are the floor plans for the house that Jackson will build.
- C** This is the household that will live in the house that Jackson will build.

What should be the telephone arrangements for the house that Jackson will build?

- D** Built-in conduit to prevent exposed wiring and provide protection against certain types of service interruption.
- E** An outlet in the living-room for all the family.
- F** An outlet in the kitchen for household business.
- G** An outlet in the master bedroom for protection at night and convenience all the time.
- H** An outlet for portable telephone in the guest-room—to serve guest or invalid.
- I** An outlet for portable telephone in basement recreation room to save running upstairs.

This is a suggested approach to a typical problem. Trained telephone engineers will help you custom-tailor efficient, economical conduit layouts for any of your projects. Just call the Business Office of your local telephone company and ask for "Architects' and Builders' Service."





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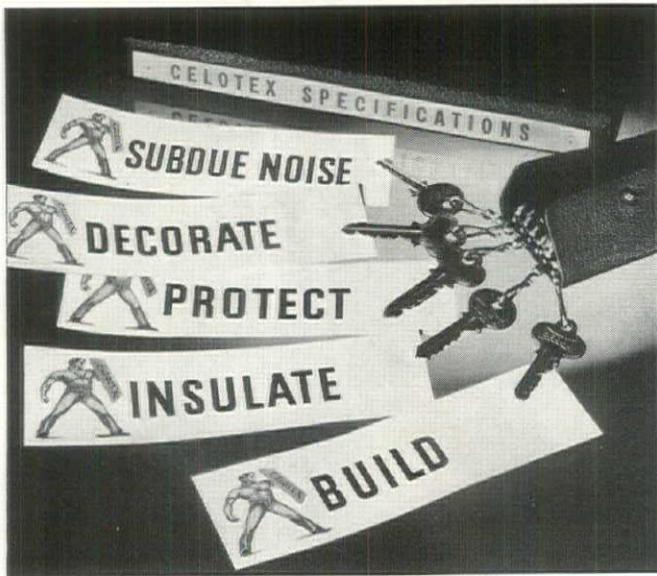
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CAMDEN NEW JERSEY

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GET THIS BOOK: It tells how Webster Systems and Radiation provide balanced heating service . . . no cold corner rooms . . . See how Webster Concealed Radiation harmonizes with the decorative schemes in a group of America's fine homes. Webster Systems of Steam Heating for residences and larger buildings provide dependability fully proven by performance in thousands of seasoned installations. This fully illustrated book, complete with design and installation data and architectural specification, is yours for the asking. No obligation, naturally.

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Celotex insulating Lath is an ideal plaster base—Celotex insulating Sheathing makes stronger, tighter walls—and Celotex Decorative Planks and Tiles harmonize with any interior decorative scheme.

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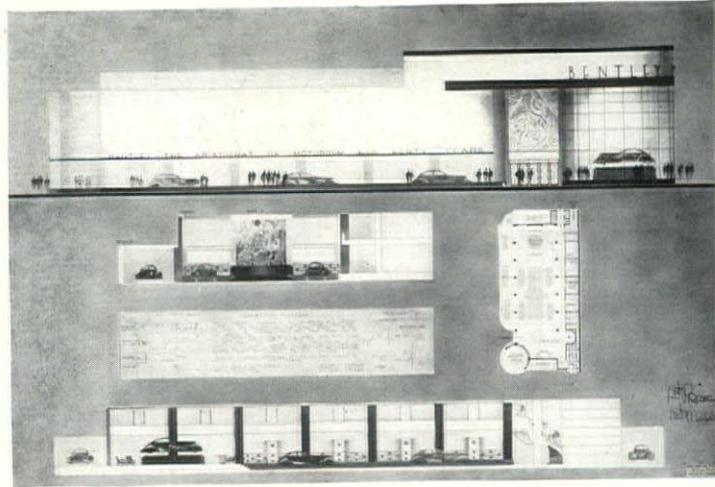
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*Celotex as Plaster Base
builds as it insulates*

*Celotex as Sheathing
insulates as it builds*



First prize of \$500 was given to James Harrison Finch of Georgia Institute of Technology for his design of an automobile salon in the Fifth Annual Illuminating Engineers Society - Beaux Arts Competition

SURVEY METHODS

THE School of Architecture of New York University has been conducting courses in housing and community planning to meet the needs of architects, engineers, and others interested as technicians or social-service workers in the fields of housing and planning. In addition to the course in Community Planning which is now being conducted under the direction of Dr. Carol Aronovici, a new course in Survey Methods is being inaugurated this term. This course deals with the various forms of survey making in relation to the improvement of communities. Training in the methods of outlining surveys, selection of fields of study, the preparation of a survey record, the evaluation of information, the classification and tabulation of facts, and the interpretation of the results in report form constitute the subject matter of the course. Students desiring to carry on special investigations or research will be given opportunities to do so under direction and in accordance with their particular interests and needs.

SYRACUSE SUMMER SCHOOL

The Department of Architecture, College of Fine Arts, Syracuse University, will conduct courses in Architecture for a limited number of students during the summer session of 1936. Collaborative work in design and construction will be stressed together with a study of existing early American Architecture in the central New York area. The session will begin July 6th and will cover a six weeks period of study. The following courses will be offered:

- Elements of Design and Theory of Architecture.
- Introduction to Construction.
- Materials of Construction.

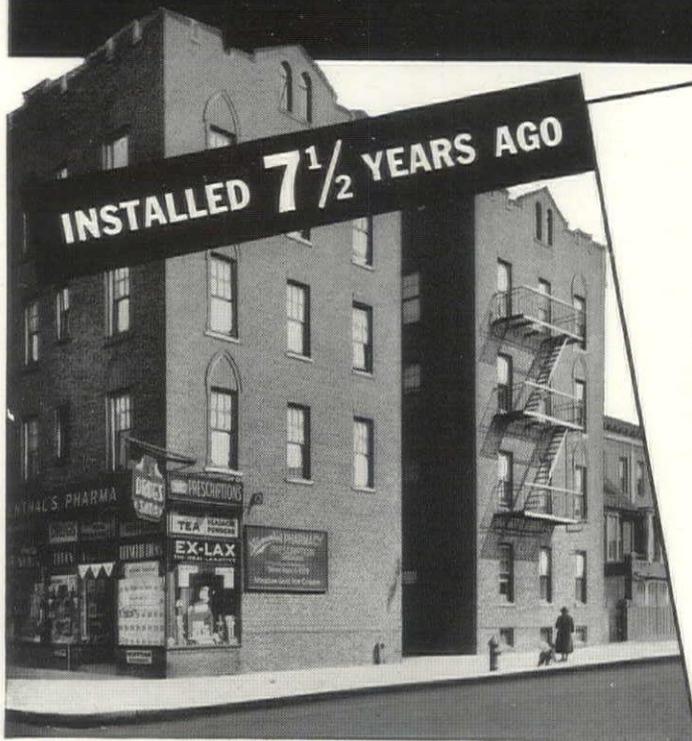
For students beginning in architecture. The structural properties, methods of manufacture, and the artistic expression of the basic material groups are considered.

Architectural Design.

One major problem and one minor problem in all grades of design. Five ten-hour sketch exercises in each grade. Collaborative criticism in design and construction. Field trips which will include a study of early American architecture of central New York. Students may elect the programs issued by the Beaux Arts Institute of Design in lieu of local assignments. One lecture each week dealing with the work of contemporary architects. Forty dollars for the session.

"ELECTROLUX ASSURES LONG SERVICE AT LOW COST"

Building owners report



*Read the experience of Mr. Louis Levine—
president of Twin City Development Co., Inc.
—with Electrolux during past 7½ years*

BEHIND the choice of Electrolux for more and more apartments and homes every year lies a record of performance—of *lasting efficiency*—that is important to any refrigerator buyer.

This record is based on the experience of builders and owners who have been equipping their properties with this modern gas refrigerator since 1927, when it was first introduced. They report that even their earliest Electrolux Refrigerators—now 7, 8 and 9 years old—continue to give the *same* dependable, low-cost service they did when new!

Tenants, too, are enthusiastic about the gas refrigerator because of its *continued* low running cost and

permanent silence. The long-life, money-saving advantages of Electrolux are the result of a *different*, simpler refrigerating method. A tiny gas flame takes the place of all moving parts . . . circulates the simple refrigerant without noise, force or wear.

Talk to any user about Electrolux! Or see your local gas company. Get all the facts before choosing your *next* refrigerators! Servel, Inc. Electrolux Refrigerator Sales, Evansville, Ind.

New Air-Cooled **ELECTROLUX**
THE SERVEL *Gas Refrigerator*

TWIN CITY DEVELOPMENT CO., INC.
1334 FORTY EIGHTH STREET
BROOKLYN, N. Y.

March 4, 1936

Kings County Lighting Company
6740 Fourth Avenue
Brooklyn, N. Y.

Dear Sirs:

We have always found that it is good business to place the welfare of our tenants first in the choice of equipment for our buildings. We believe that our apartments reflect this attitude. And this was one of the big considerations in our choice of our first Electrolux Refrigerators seven and a half years ago for our 19 Apartments at 801 - 72nd Street.

The silence and low cost to run of the gas refrigerator were two features which we knew would add to the satisfaction of our tenants. Furthermore, it seemed to us that a refrigerator with no moving parts should offer a very minimum of service interruptions with a resulting small cost of maintenance. In addition, we had the assurance of your Company's dependable service should we ever need it.

On every point, the performance of the Gas Refrigerator has justified its choice. Tenants have had continued low operating cost with our 18 Electrolux installed more than seven years ago. These refrigerators continue to be as efficient and silent as when we put them in. And you know what low maintenance we have enjoyed during these years.

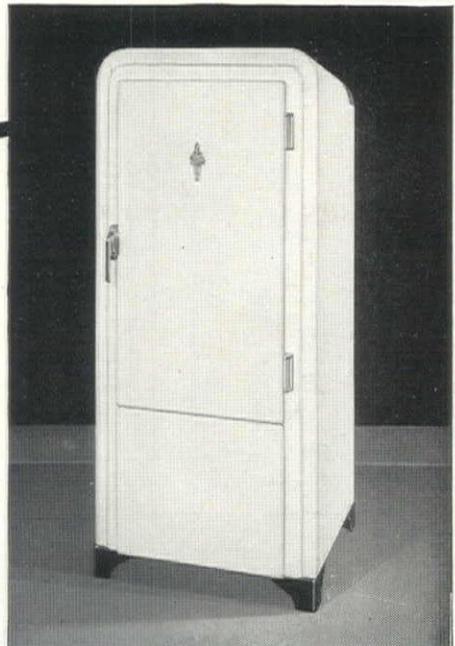
Since our first purchase of Electrolux, we have installed it in every building we have built. Today, we have a total of 255 Gas Refrigerators in our six apartment buildings, and I can heartily recommend this refrigerator to any builder or owner.

Cordially yours,

TWIN CITY DEVELOPMENT CO., INC.

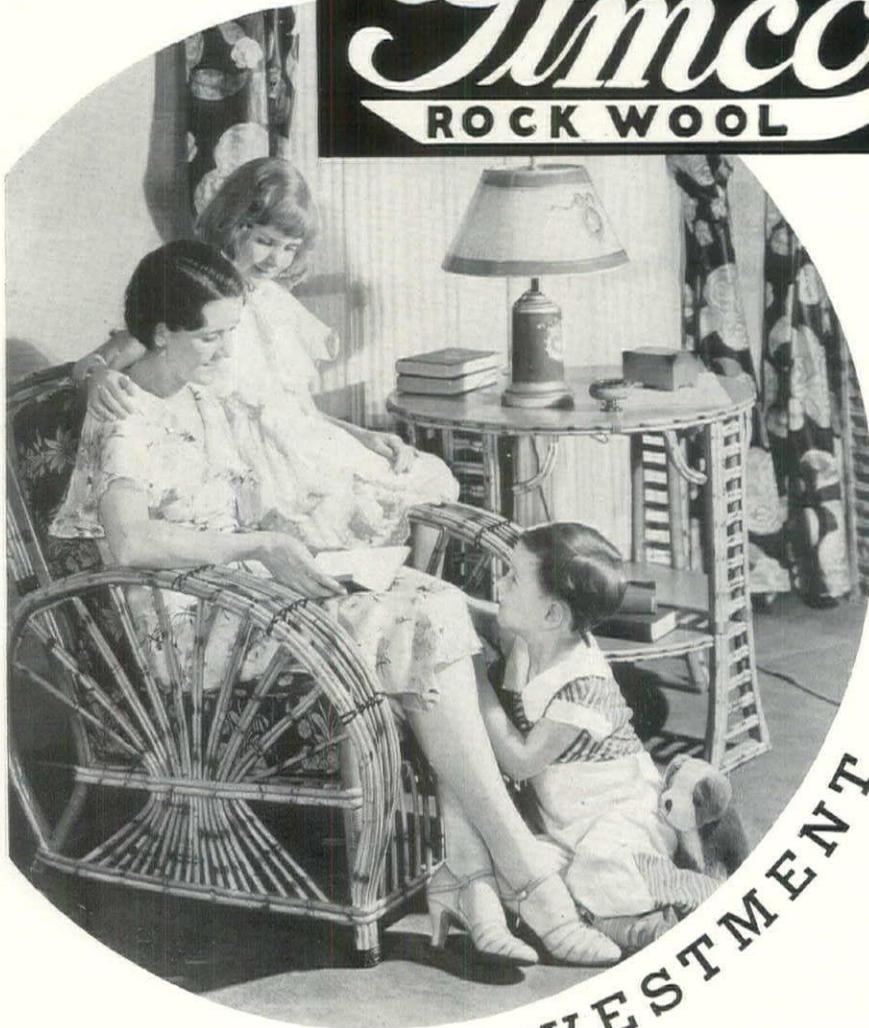
Louis Levine
Louis Levine,
President

LL:HP



Gimco house insulation

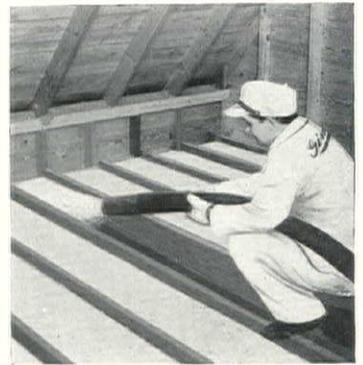
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Architects, builders, and home owners everywhere specify this superior, comfort giving insulation

Write for file 37-b for complete details of the insulation that has pioneered home comfort.

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————— C. HOWARD WALKER —————
 1857—1936
 AN APPRECIATION BY WILLIAM EMERSON

The death of C. Howard Walker on Easter Sunday, took from our midst a most vital, picturesque, and valiant spirit.

No more caustic critic, no more loyal admirer, no more devoted defender of those standards, beliefs, and friends that were ever dear to his heart, has lived among us.

His was the privilege to love with so clear an insight that his criticism was only an incentive to greater effort. He differed violently even with those dearest to him, and loved them the more that they withstood him. His tenacity was only equalled by his generosity.

For a younger generation he represented, not alone scholarly learning made vivid by personal reminiscence, but an essentially dynamic personality. Contact with him shook the student out of his immature complacency, revealed how narrow were his theories, and how without foundation his convictions.

Flashing glimpses of his many capacities and interests come with the memories of the past fifteen years. His ability to organize odd groups of individuals and galvanize them into unified action marked his handling of the varied elements gathered to celebrate the opening of a Commons Room in the School of Architecture of Technology. Within the scope of the gorgeously Renaissance pageant that he had conceived were gathered students and teachers, architects and dilettanti, all subordinating their individual tastes to his

controlling, if also autocratic, sense of the decorative unity that should characterize alike—words, action, and setting.

No one who was present at the convention of the American Institute of Architects when modern architectural tendencies were under discussion, can forget the vigorous denunciation, the devastating irony with which he shattered what to him were the false standards and ugly forms of contemporary architecture. They were the words of a defender of the faith against the assault of barbarism.

He was recently one of a group of architects traveling to Paris as bearers of gifts to the Ecole des Beaux Arts. No one in that group more truly personified the essential friendliness, the "joie de vivre" that characterizes architects on a vacation; certainly no worthier representative of our profession attended a few days later the International Congress of Architects at Dublin. The world of culture was his stage.

He was endlessly interesting, exasperatingly lovable—he had the courage of his convictions!

The following lines from Browning's "Epilogue" were surely written to his measure:

"One who never turned his back but marched breast forward,
 Never doubted clouds would break,
 Never dreamed, though right were worsted, wrong would triumph,

Held we fall to rise, are baffled to fight better, sleep to wake."
 C. HOWARD WALKER — HAIL AND FAREWELL

Attractive roofs, with long life

Genasco

Asphalt Shingles

As the architect of the building, you want the roof to *look* well. And for continued good-will you want a roof that stands the test of years.

In other words . . . you please and satisfy your client and strengthen your own good reputation when you specify *Genasco Asphalt Shingles* for the job. These shingles have the famous Slam-Test Coating, made with Trinidad Lake Asphalt Cement. This means long life for the roof and beauty that will last through the years. Illustrated folders in colors of each type of Genasco Slam-Test Shingles will be sent on request. Write NOW!

THE BARBER ASPHALT COMPANY
 PHILADELPHIA

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Genasco Latite Shingles have an exclusive patented feature which locks each shingle securely to the adjoining shingle. They have double thick butts which give the roof a desirable shadow line. Furnished in many beautiful colors.



THE BARBER ASPHALT COMPANY, Philadelphia

Please send me the folder of the type of Genasco Shingle marked below:

-Genasco Sta-rite Shingles
-Genasco Sealbac Shingles
-Genasco Hexagon Strip Shingles
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KENMAR *Copper Shingles*



*Pelham Manor, N. Y. Residence of Edmund C. Gause
Re-roofed by Benj. Riesner, Inc., N. Y. with Kenmar Shingles, Patinated*

THE new opportunities to create enduring roofs of unusual beauty—with Kenmar Copper Shingles—merit thorough investigation.

Kenmar Shingles make entire roofs of copper practical and economical for any pitched-roof.

See our catalog in Sweet's, Section 8-36. Write for descriptive literature.

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MANUFACTURERS OF SHEET COPPER SINCE 1849
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Burrowes Rustless Screens



FINE SCREENS FOR FINE HOMES



All Types of Installations in
Metal and Wood Available
Windows and Doors



FACTORY TRAINED REPRESENTATIVES WILL
GLADLY ASSIST ON YOUR SCREEN PROBLEMS

Always Include Screens
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INQUIRE FOR *Burrowes* INSIDE ALLMETAL
STORM SASH

THE BURROWES CORPORATION

70 Free Street, Portland, Maine

DEATHS

Albert Farwell Bemis, housing authority and former director of the Federal Reserve Bank of Boston, died recently in Phoenix, Arizona. He was 65 years old. Mr. Bemis was graduated from Massachusetts Institute of Technology in 1893. He developed an early interest in housing. He was President and Director of Bemis Industries, Inc., South Tamworth Industries, Inc. and the Housing Company. In 1933 and 1934 there were published the first two volumes of Mr. Bemis' projected three-volume study of man's dwellings called "The Evolving House." Mr. Bemis was a life member of the Corporation of Massachusetts Institute of Technology, and in 1910 he was elected President of the Alumni.

Dr. Werner Hegemann, an international authority on town planning and architecture, died recently in New York. Dr. Hegemann was born in Mannheim, Germany, and had resided in the United States since 1933 when he was exiled from his native country. He became interested in improved housing conditions for the masses at an early age. In 1910 he directed exhibitions on housing in Berlin and Dusseldorf, and personally conducted 35,000 members of labor unions through the exhibits. In 1911 and 1913 he published two volumes summarizing the results of international exhibits. Shortly before his death, his first volume of a projected two-volume work, "City Planning—Housing," was published, and is reviewed in this issue.

ANNOUNCEMENTS

Edward F. Brueggeman and Guy W. Swaim, architects, announce their association with the firm of William S. Allen. The firm will continue the practice of architecture under the name of Brueggeman, Swaim & Allen, with offices in the Gazette Building, Little Rock, Arkansas.

Christian W. Brandt, architect, announces the opening of his new office for the practice of architecture in the Madison Theatre Building, Detroit, Mich., and requests that manufacturers' catalogs be sent to him.

William A. Monahan, architect, announces the opening of an office for the practice of architecture, at 97a Newbury Street, Boston, Massachusetts.

Alfred W. Grant and L. Livingston George, architects, announce that they have opened an office for the practice of architecture, at 44 East State St., Westport, Connecticut.

John R. Rochart, architect, formerly associated with the late Cass Gilbert, announces the establishment of offices at 22 East 40th Street, New York City.

Charles S. Telchin, architect, and **Francis X. Gina**, announce the removal of their offices to 5 East 44th Street, New York City.

George Oakley Totten, Jr., architect, announces the removal of his offices to 2633 Sixteenth Street, N.W., Washington.

Harrison Gill, architect, has moved his office to 101 Park Avenue, New York City.

Edward Shepard Hewitt, architect, announces the removal of his office to 32 East 57th Street, New York City.



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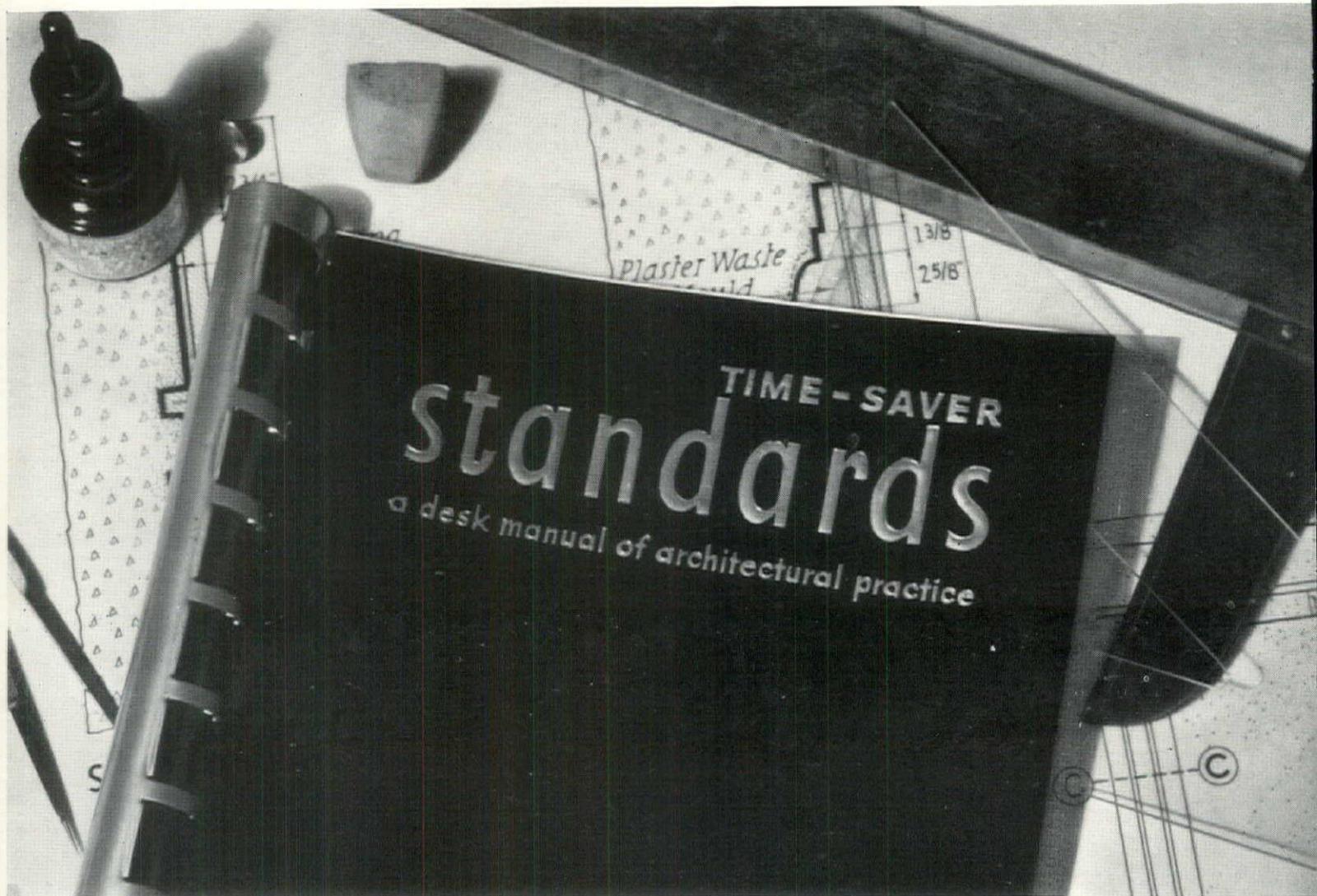
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BOOKS

CITY PLANNING - HOUSING

By Werner Hegemann

First Volume of Text: Historical and Sociological; Architectural Book Publishing Company, 112 W. 46th St., New York City; 1936; \$3.75

It might have been expected that a companion work to Dr. Hegemann's earlier book, the well-known "Civic Art, the American Vitruvius," might again deal mainly with the esthetic aspects of public planning and public architecture. But just as the intervening years have brought to the architectural profession better understanding of, and concern with, the economic and sociological implications of their work, so, too, Dr. Hegemann found that it was these aspects of city planning and housing that require clarification and a new presentation today. Thus he has here emphasized "the adequate solution of problems of social and political economy as pre-conditions of artistic possibilities and civic beauty." Or, as he said in his introduction, "the present volume approaches the problem of city planning from the more general premise that no city should be considered more beautiful than its most ugly and unsanitary tenement house. A chain is never stronger than its weakest link."

This is not a technical book. Rather it is an historical inquiry into real estate speculation and the false assumption that comprehensive planning for better living is a principle at variance with established American custom. Beginning with the writings of George Washington (who, as Dr. Hegemann reminds us, "although a soldier, was not a professional one nor an enthusiastic one, but a large-scale real estate man and, later, a farmer"), and following through with the words of Hamilton, Jefferson and Lincoln, Dr. Hegemann has brought together evidence to show that governmental support of planning and public works has always been an ideal upheld and preached by our greatest statesmen.

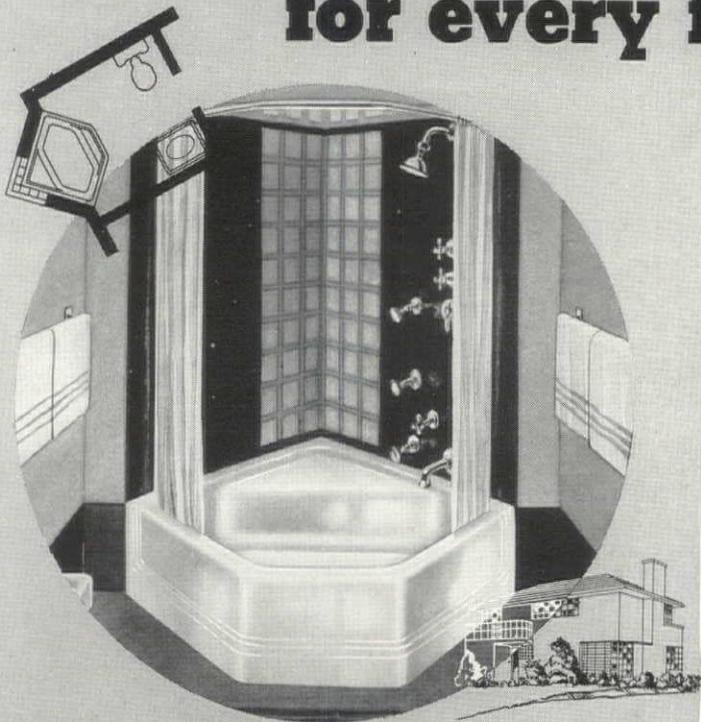
This work is timely for the many architects who are now confronted with uncertainty as to the fundamental constitutionality of public works that are in progress.

Here then is a handsome book which not only sums up all of the historic facts bearing on the question, but there are quotations from George Washington in support of the principle we now call "zoning"; the report of how Hamilton argued for the centralized control of public works; and what Jefferson contributed to the establishment of a "National Plan" for these United States. Present policies are thus seen in better historical perspective. And while the latter chapters of the book, dealing with the current move to revise building and zoning ordinances in New York, may seem to be of local interest, the points brought out can be used just as appropriately to good effect, throughout the country.

"In the settlements created by the superior mind of the bees one finds between the areas reserved for residences, nurseries, storehouses and avenues a practical relation. Human cities are generally not even as intelligently planned as bee hives or ant hills. Nor do the public works of the human race promote the 'pursuit of happiness' of all its members as efficiently as the public works of the beavers promote beavers' happiness. Beavers do not build their dams so low, or their residences and storehouses so high or so compactly as to make their overground or underground avenues of approach inconvenient or impracticable. Their building codes serve better than human codes the ideal of 'the greatest good for the greatest number.'"

(Continued on page 116)

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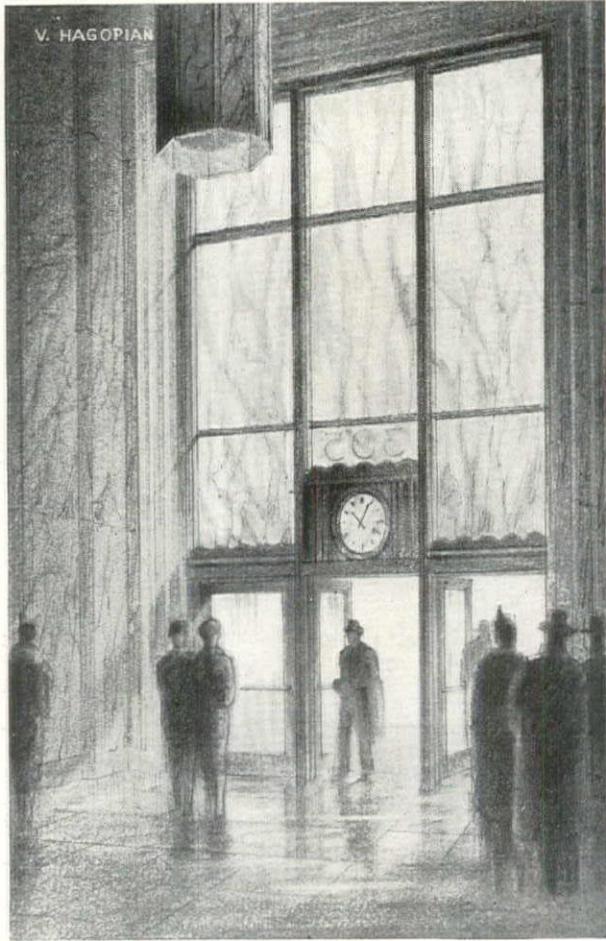
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(Continued from page 114)

The final chapters deal with the knotty problem of the elimination and prevention of slums, following a concise and pointed summary of the political development of public housing with a dispassionate analysis of the solutions, foreign and domestic that have been tried to date. Indicating the inapplicability of most of the Central European and Russian policies to American conditions, and while pointing to much that can be learned from British and, more especially, Swedish methods, Dr. Hegemann saw the way out through America's own established ideals and rationalism which were, "after all, the great motivating power that discovered and developed her."

Dr. Hegemann died a few days after this first volume was published, but the second volume and the large, folio-sized atlas have been carried to a sufficient stage of completion that publication of them is expected before the year is out.

Robert C. Weinberg.

THE ENGLISH COUNTRY HOUSE

By Ralph Dutton

Foreword by Osbert Sitwell; Charles Scribner's Sons, 597 Fifth Ave., New York City; 1936; \$2.75

The author's aim has been to familiarize the reader not only with the form of the country houses of England, but also the manner of life, the human side back of stone and brick and thatch. He would tell you what the people in these houses ate, how they felt, what they said, and how they dressed.

HARVARD CITY PLANNING STUDIES

By Katherine McNamara

Tenth Volume: Bibliography of Planning, 1928-1935; Harvard University Press, Cambridge, Mass.; 1936; \$3.50

There is a great sign of the times in the need for and production of this book. Until a few years ago, all of the material with regard to city planning could have been listed in a very small pamphlet. A brief volume published in 1923, "Manual of Information of City Planning and Zoning" has already become sadly out of date. The present volume supplements this, and brings information as to details of the flood of writing that has swept over us in the present keen interest in the subject.

GARDENS AND GARDENING, 1936

Edited by F. A. Mercer

The Studio Publications, Inc., 381 Fourth Ave., New York City; 1936; \$4.50

The Studio's annual issue under this title has come to be recognized as an important element in contemporary garden literature. Each year, in addition to illustrations of gardens in various parts of the world—chiefly America and England—horticultural authorities contribute chapters upon certain matters of immediate interest to amateur gardeners. This year it is with a strong note of regret that we notice the last contribution of Clarence Fowler, who died a few months ago: "American Herbaceous Plants—Their Place in the Garden."

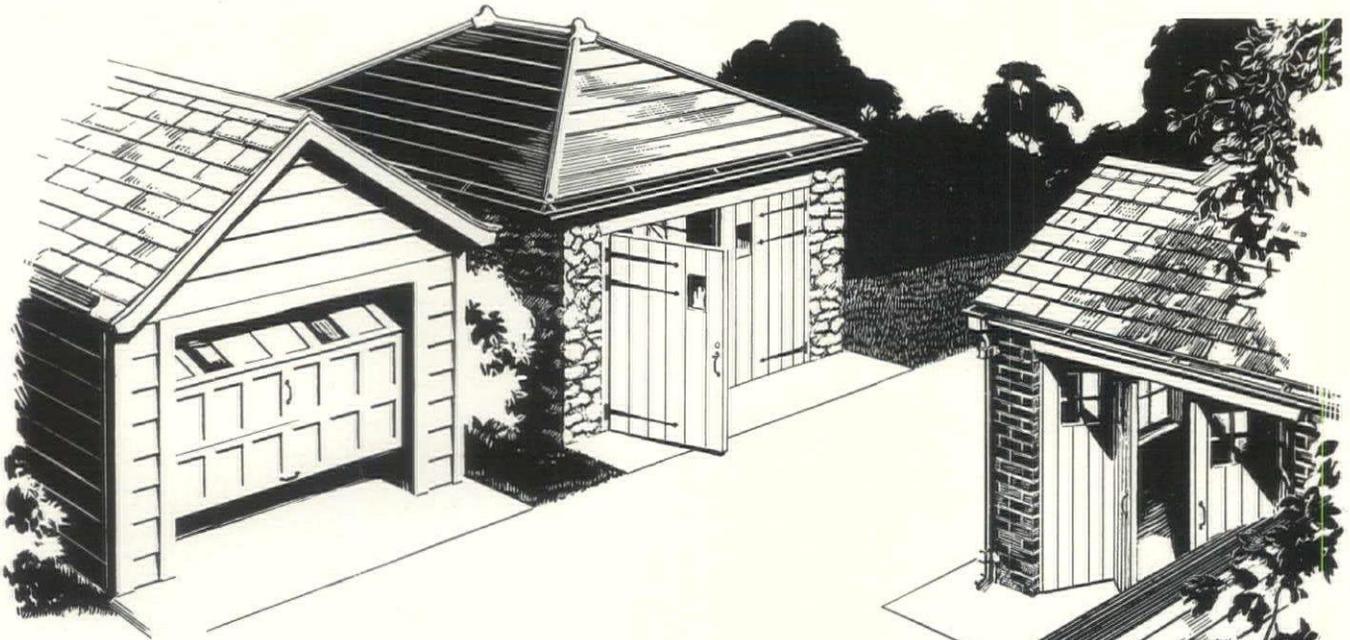
DESIGNS FOR WOOD-CARVING

By Herbert W. Faulkner

Harper & Brothers, 49 East 33rd St., New York City; 1936; \$1.00

The present collection of plates is issued as a supplement to the author's previous book, "Wood-Carving as a Hobby." It should be of considerable value to those who know this book, and who have advanced sufficiently in the craft.

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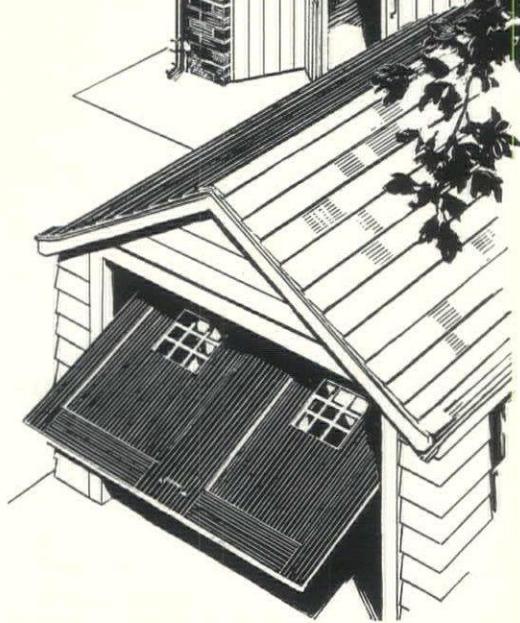
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layouts . . . things the public has never before been offered in medium priced homes . . . plans for simplified heating and air conditioning that mean greater health and comfort . . . time-saving electrical kitchens and laundries that end drudgery . . . new electrical specifications which every house should have and without which no home can be truly modern.

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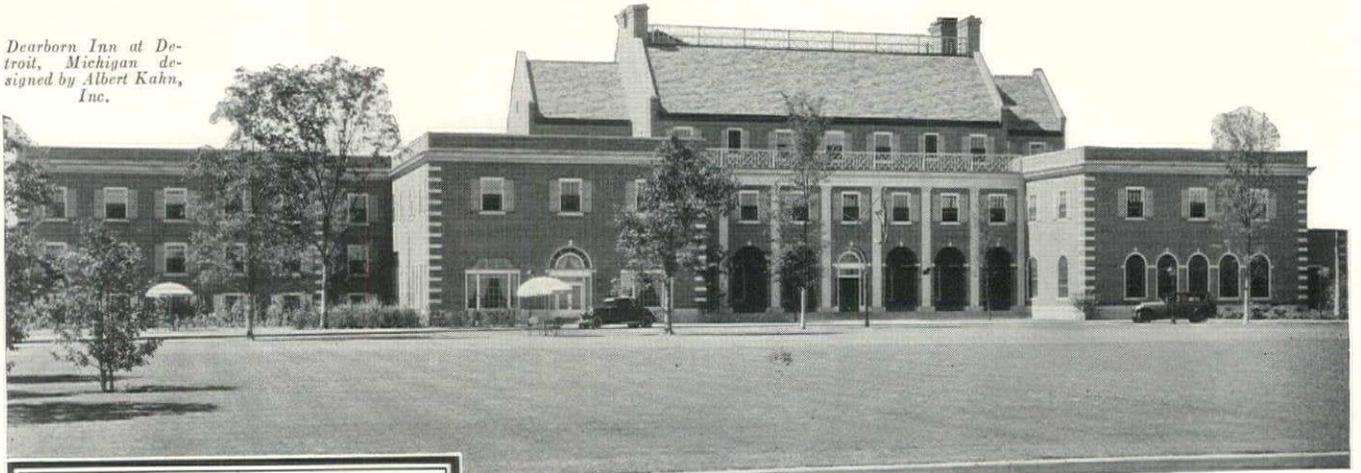


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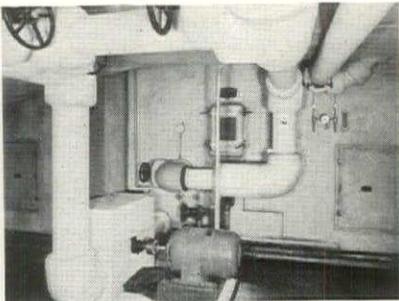
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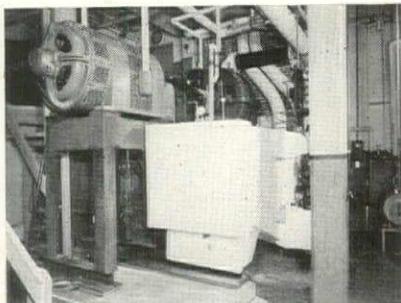
Dearborn Inn at Detroit, Michigan designed by Albert Kahn, Inc.



Cold ducts throughout the recently air conditioned Dearborn Inn are insulated with 1" and 2" Armstrong's Corkboard.



No cold line losses in this inn! All cold pipes are protected with Armstrong's Cork Covering. Dehumidifier in background is also cork-insulated.



Armstrong's Corkboard Insulation insures maximum efficiency of this 200-ton Carrier Centrifugal Refrigeration Compressor.

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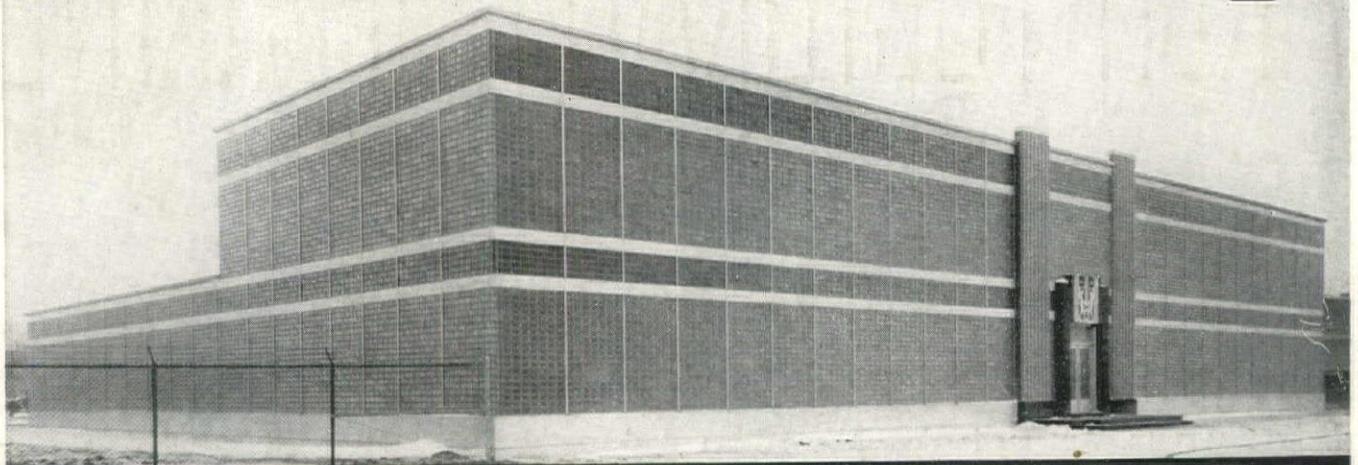


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