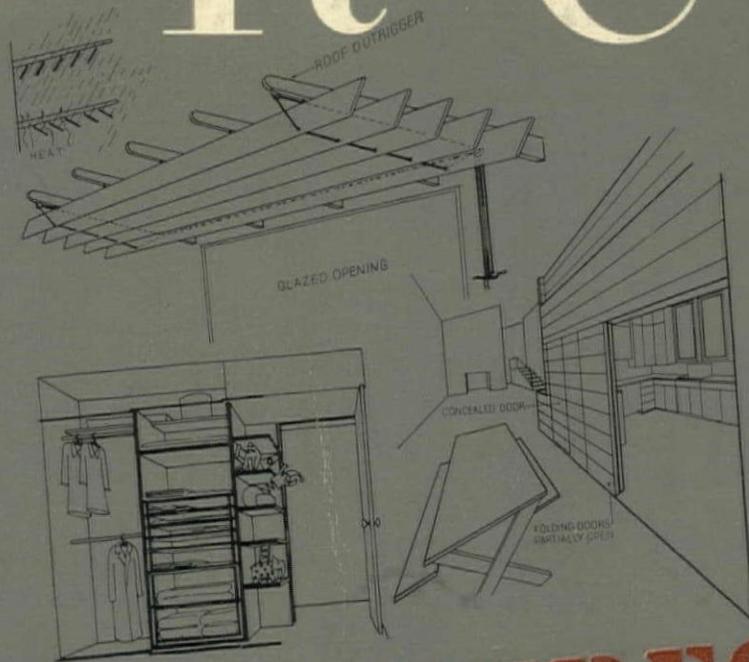


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LOW-COST HOUSES



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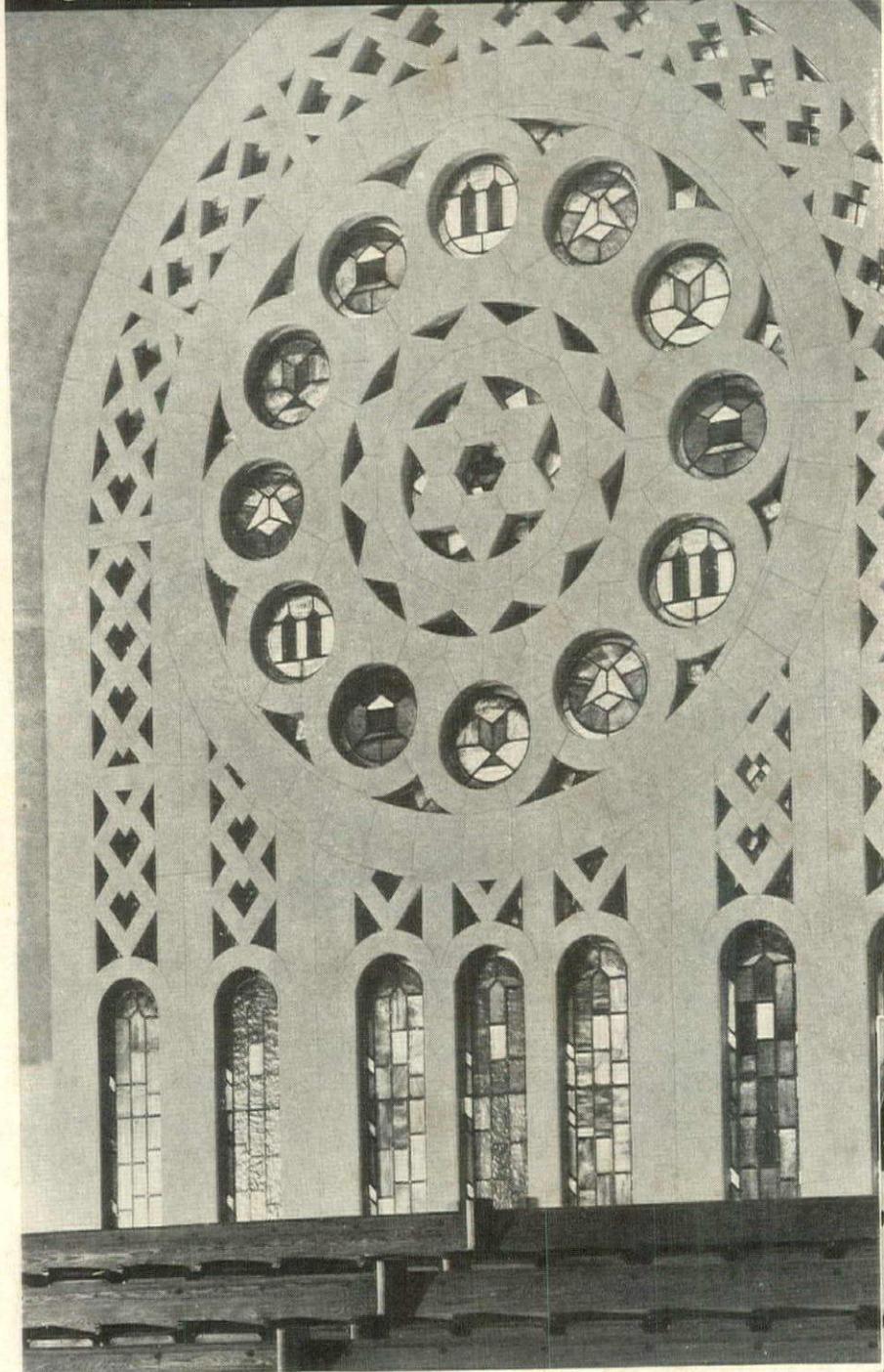
BUILT-IN FEATURES

OCTOBER 1941



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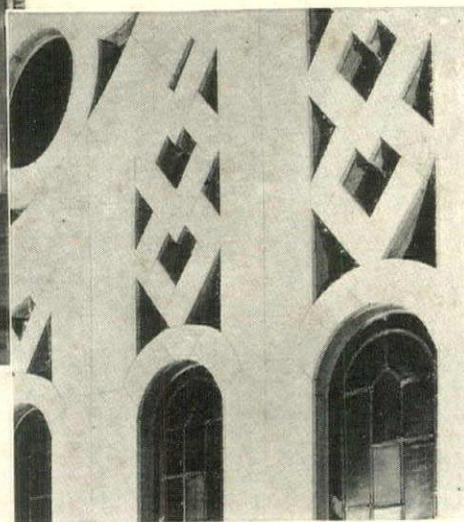


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PRIORITIES

For months Building has hemmed, hawed and hollered because it has been difficult to obtain certain essential materials and because Government had done nothing to straighten out the mess. But, at long last, something has been done. Fortnight ago the Office of Production Management stepped from the clouds of controversy which have confused its attitude toward the importance of housing to defense, announced the procedure by which builders of privately financed *defense* housing may obtain preference ratings for their projects and, incidentally, indicated that the much ballyhooed shortage of strategic materials is not as acute as some alarmists have claimed. Thus, OPM has promised priority assistance for the production (including materials and equipment) of no less than 300,000 defense dwelling units during the next six months. In brief the housing priority picture now looks like this:

FEDERALLY FINANCED DEFENSE HOUSING

OPM's Defense Housing Coordinator Charles F. Palmer will signify the importance he attaches to each project when he originally certifies it for the requisite Presidential approval. Later on, when construction of a project is about to start, Federal Works Administrator John M. Carmody, who is responsible for the execution of all Government defense housing projects via FWA's various building sub-agencies, will submit a direct request to OPM for priority assistance.

PRIVATELY FINANCED DEFENSE HOUSING

As discussed in detail below, builders of this type of housing, generally defined as houses located in specified defense areas to sell for less than \$6,000 or to rent for less than \$50 per month, will apply through local FHA field offices for priority assistance in the procurement of critical materials (practically all metal house parts) itemized on the official "Defense Housing Critical List" briefed on page 58. Applications will be reviewed by representatives of Defense Housing Coordinator Palmer in local OPM offices and, if approved, will be submitted to OPM's Priorities Division for the assignment of "Project Preference Ratings." These ratings will be in the "A" group (A-1-a, A-1-b, . . . A-1-j, A-2, A-3, . . . A10) which is topped only by the single rating "AA."

NON-DEFENSE HOUSING

Although official priority procedure for this type of housing (located in non-defense areas or marketed at more than \$6,000 or \$50 per month) had not jelled fortnight ago, probability is that all non-defense housing already under construction will be able to earn preference ratings—but below those assigned to defense housing (probably BB, B-1, B-2, etc. down to the lowest B-8 rating). Sponsors of projects not yet started will probably have to shift for themselves.

BACKGROUND

As usual, the reason for the delay in reaching a housing priorities decision may be attributed to petty jealousies among the Washington housing agencies. Defense Housing Coordinator Palmer asked for housing priorities six months ago, and the mere fact that an outsider first suggested them prompted OPM's Priorities Division

to stall for fear of losing some of its control. Then, the Federal Home Loan Bank Board, which at first approved of the use of FHA field offices as OPM representatives, upset the proceedings by objecting to the proposed omission of FHLBB field offices from the program. Finally, the reorganization of OPM, which saw the priorities post vacated by Steelman Edward R.

Stettinius and refilled by Mail Orderman Donald M. Nelson of Sears, Roebuck and his six fellow members of the new Supply Priorities and Allocations Board, required that all housing priority progress to date be reviewed and thus be set back again.

PRIORITIES PERSONNEL

Fortnight ago, however, all important details of the priority procedure for private defense housing became apparent through official announcement. In the first place, Architect Sullivan W. Jones, a 63-year-old native and resident of New York, will be the king pin in the housing priorities picture as head of that section of Nelson's new SPAB. An expert at both building and administration, MIT-educated Jones was affiliated with various small architectural firms until 1910 when he became (for four years) a partner in the architectural trio of Palmer (not Charles F.), Hornbostel & Jones. During World War I he acted as supervising engineer in charge of construction at the Jamestown (Va.) Naval Operating Base, later served for six years as New York State Architect, still later (1934-35), as the Presidentially appointed chairman of the NRA Construction Industry's Planning and Adjustment Board.

MATERIAL SUPPLIES

While Architect Jones is shoulder deep in housing material problems and statistics, not even he knows the extent of the supply of critical items. Plain truth is that nobody knows. Some Government pessimists believe that shortages are so acute with respect to most of the critical housing materials that it is too late for priorities to do much good. On the other hand, more thoughtful Government economists argue that the past programming of materials has been so irrational that statistics are now useless; that available supplies are much greater than these statistics indicate. Substantiating their claim of utterly unrealistic defense material allocations, they point to huge piles of structural steel dumped in the middle of prairies and allowed to rust away even before plans had been completed or land acquired.

Good indication of the official estimate of the critical housing materials supply is the fact that OPM last month finally decided to limit its privately financed housing priorities to 200,000 dwelling units during the first stage of the program—October 1941 to April 1942. This would indicate that OPM believes that critical materials will be available during this six-month period for at least 300,000 dwelling units—200,000 by private enterprise, 100,000 by Government. No reason for alarm is inherent in these figures, for during the entire twelve months of 1940 less than twice this number of dwelling units (540,000) were produced in the entire U.S.

(Continued on page 58)

HEADWAY AND HEADACHES

TITLE VI EXTENSION

On September 6 by scrawling his signature on a Congressional bill, President Roosevelt opened for private enterprise the door to \$200 million of defense housing. The mechanics: a boost from \$100 to \$300 million in FHA's Title VI authorization to insure mortgages on defense houses privately built and privately financed in 210 specified "defense areas." Since the maximum mortgage on a Title VI house is \$4,000 (sale price: about \$4,500), estimate is that the new boost in insurance powers will produce some 60,000 houses.

Under the previous \$100 million authorization, FHA on September 1 had received applications totaling close to \$111 million covering 30,343 houses, had issued commitments totaling \$85 million covering 23,904 houses. Under Title VI, builders may obtain insured loans covering 90 per cent of the value of houses built for sale or rent, while under the regular Title II program mortgage insurance is limited to 90 per cent of the valuation of owner-occupied houses.

DEFENSE PUBLIC WORKS

Authorized in July (ARCH. FORUM Aug. 1941, p. 95), the Federal Works Agency's Defense Public Works Program month ago was already under way. The President had approved 121 projects with a total estimated cost of \$31.6 million. Schools and school additions form the largest group of approved projects by type; water supply and sewerage systems rank second in importance in this Federal loan and grant program to assist military reservations and the Governments of defense boomed communities in supplying urgently needed public utilities. Other approved projects include roads, bridges, fire houses, recreation centers, health centers, hospital additions and drainage projects.

Finding needed projects is no problem. FWA already has applications for more than \$500 million, some of which are from greedy cities for obviously non-defense purposes. FWA's major task is to select the comparatively few sought-for projects which its \$150 million Defense Public Works fund will help finance.

ARMY BUILDERS

Last fall the Army gave its Corps of Engineers charge of building all Air Corps facilities and Atlantic bases, thus relieved the hard-pressed Quartermaster Corps of 30 per cent of its construction activities. A little later, to quell criticism of slow progress and high costs, the Army shifted Brigadier General Brehon Somervell and some lesser wigs from the Corps of Engineers to the top of the Quartermaster Corps' Construction Division. Last month came complete admission that the Quartermaster Corps' accomplishments in construction (cantonments, flying fields, industrial plants, warehouses, highways, railroads, etc.) were not what they might have been, that the special Congressional "Truman Committee" charges of time- and money-wastage held some water. Thus, with the endorsement of the War Department, Chairman May of the House Military Affairs Committee handed Congress a bill which would transfer all Army construction activities from the Quartermaster Corps to the Corps of Engineers. Since the bill is officially sponsored, chances are that it will be made law—and quickly. Only important Army objector to the move is Quartermaster General Edmund B. Gregory.

The shift seems logical. While the Quartermaster Corps gained some peacetime experience building CCC camps and a comparatively few barracks, officers' quarters and flying fields, its construction staff was small and ill-prepared to handle the tremendous defense expansion program launched last year. On the other hand, the Engineers continually keep in practice and maintain a large staff—during peacetime they are charged with execution of all river, harbor, flood control and coast defense programs. And, to the Engineers peacetime staff of West Point honor men have recently been added expert Reservists and National Guardsmen from important civilian posts.

The Building industry will soon note two important changes in Army construction procedure once Major General Julian L. Schley, Chief of the Engineer Corps, has formally been given the whole Army construction job: 1) Its ranks will be thinned by the calling of more civilian technical experts, for the Engineers have always been willing to take on promising new talent. The shift of authority means more than a reshuffling of army personnel, despite the fact that some 1,400 of the Quartermaster Corps' 7,560 officers are

(Continued on page 6)



Temporary housing camp laid out in an interesting triangular pattern for San Diego aircraft industry workers contains close to 100 of the 3,200 trailers which the Farm Security Administration month ago had set in place the country over. Each trailer makes room for a maximum of four persons—usually one family—and rents for \$6-\$8 per week. Attractive building shown below houses the camp's sanitary facilities.



Photos, FSA—Lee

RICH FORMICA REALWOOD

- in the President's Room at the National Airport



WOOD appears at its very best when it is cured into a sheet of Formica and acquires the clear, deep, permanent plastic finish all of these sheets possess. That was doubtless the reason why Howard Lovewell Cheney, designer of the new National Airport Building in Washington chose Formica Walnut Realwood for the doors and walls of the President's reception room which is illustrated above.

Genuine wood veneers thus incorporated in Formica sheet are protected from crazing and cracking; the finish does not fail and need to be renewed; the material becomes inert chemically and resistant to staining by any ordinary solution. It can be washed with soap and water or other solvents and is therefore easily kept clean. After years of use, in fact, it will look just as it did the day it was installed.

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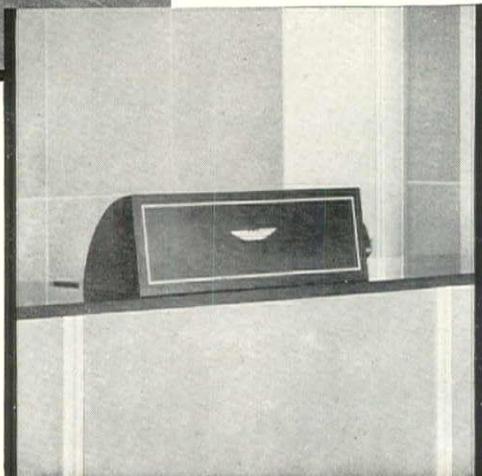
An endless variety of decoration is possible by pressing silhouette inlays in a contrasting color into the Formica sheet when it is made.

Let us send literature showing erection details and color charts.



Entrance doors from the Ante-Room to the President's Reception Room at the National Airport, Washington. All Formica material was installed by John C. Knipp & Sons, Baltimore.

In the main lobby, the ticket desk has a black Formica top and black turrets made of Formica sheets with wing inlays of silver.



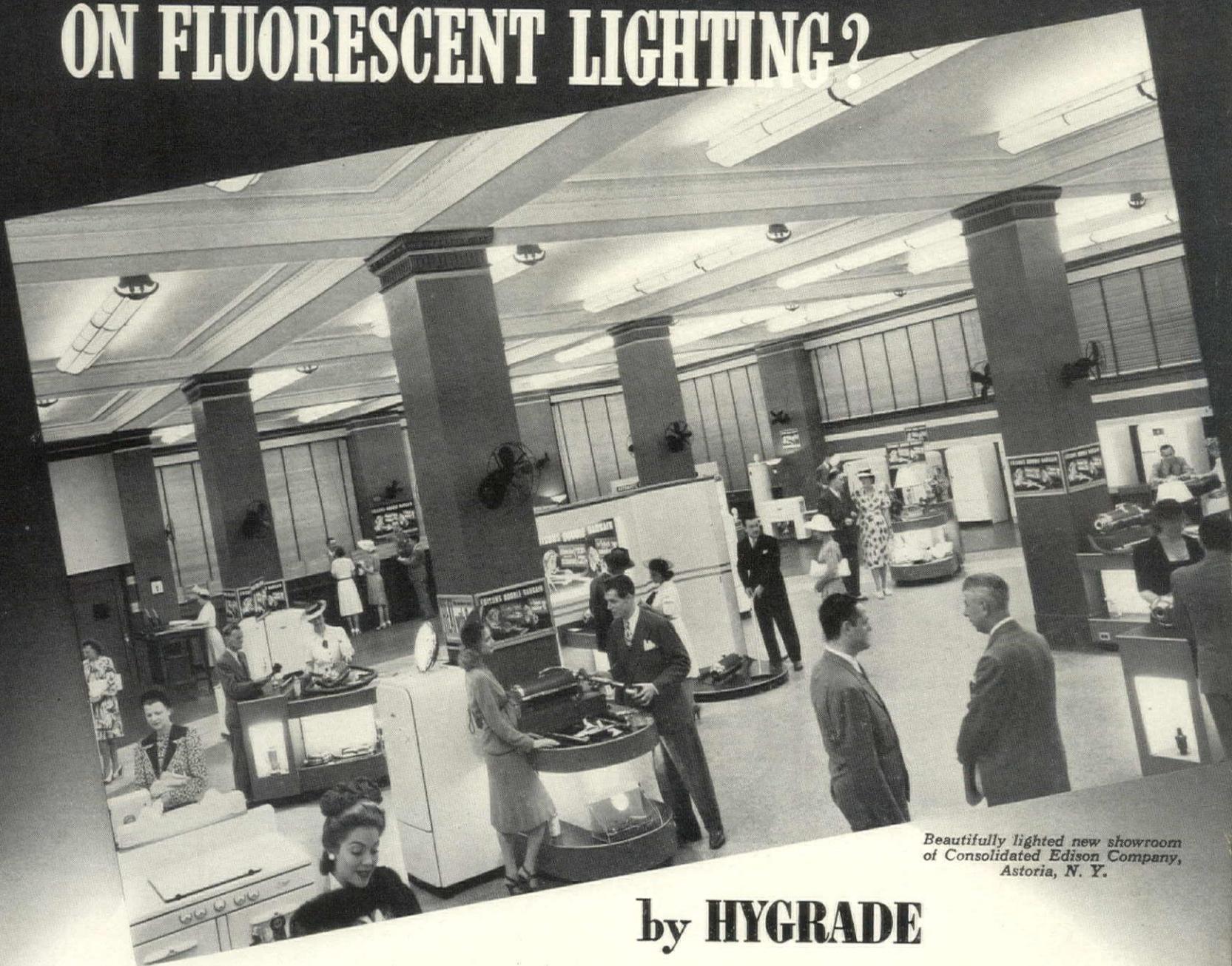
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(2) The manufacturer's standards. HYGRADE employs only the best—in brains, materials, and workmanship. That's why HYGRADE can offer a complete guarantee covering the entire lighting job—lamps, fixtures, starters, everything!

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HYGRADE-

Everything in Fluorescent at its Finest!

(Continued from page 4)

now assigned to building construction and maintenance. The best of these will, of course, be absorbed by the Engineers as they gradually take over the Quartermasters' construction activities. 2) The Engineers will greatly accelerate the decentralization of Army construction authority which was started months ago by General Somervell. Thus, architects, engineers, contractors and material dealers who have long groused about the frequent Washington trips necessary to handle important defense construction assignments in all parts of the country will soon be able to spend less time commuting, more time working.

The shift in construction responsibility from the Quartermasters Corps to the Corps of Engineers is not what the Truman Committee recommended: assignment of all Army construction activities to a new division of the War Department which would be constantly engaged (during peace, defense and war) either in construction or in studying construction problems and in preparing plans for the future. But the officially sponsored proposal made by Representative May is equally sound. It worked during World War I when the Quartermaster Corps was once before bereft of its construction functions. Whether or not the Quartermaster Corps will ever get them back (as it did in 1920 on the recommendation of General Pershing) remains to be seen.

P. S.: INDIAN HEAD

Month ago the record set by National Homes Corp. in the demounting and reerection of one of its prefabricated wood frame houses at the Public Building Administration's Indian Head, Md. defense project (268 man hours—ARCH. FORUM, Sept. 1941, p. 188) was shattered by another prefabricator. Tennessee Coal, Iron and Railroad Co., a U. S. Steel Corp. subsidiary, dismantled one of its steel-framed houses in 4 hours and 40 minutes, trucked it 32 miles and reerected it on another Indian Head site in 3 hours flat. Elapsed time of the demounting and rebuilding operations: 104 man hours.

REPAIR FOR DEFENSE

Exemption from the Federal Reserve Board's installment buying curbs of all loans for home remodeling and repair in defense areas (see p. 10, col. 2) prompted FHA officials to heave a sigh of relief and to put increased energy behind their "repair for defense" program. Home Owners' Loan Corp. immediately fell in line, offered FHA the benefits of its 550,000-house remodeling experience, offered the advice of its salaried technical personnel to would-be remodelers. Then the President got behind the program, authorized the use of \$100,000 of his "emergency fund" to pay



"Temporary Building D" in Washington, D. C., finished in 75 days at a cost of \$510,777, will accommodate about 1,400 currently overcrowded Government defense workers. Containing 180,000 sq. ft., "Tempo D" is comprised of a head wing running a full block along Independence Ave. (almost directly across from the new Social Security building) and seven right-angle wings projecting into the backyard of "Temporary Building E," erected during the Capital's World War I expansion. Architect: Public Buildings Administration. Contractor: McCloskey & Co. of Philadelphia. Construction: wood frame, faced with asbestos board. Fire protection: fire walls and an electrically controlled sprinkler system. First occupant: OPM's Leon Henderson and his Office of Price Administration.

the fees of private technicians to supplement HOLC's staff. Thus by applying to local HOLC offices home owners may receive free technical advice on the conversion of their houses into multifamily buildings for the accommodation of defense workers.

Only strings attached to the program are that to be eligible for FHA-HOLC assistance a remodeling operation must 1) be located in an area of acute housing shortage occasioned by national defense—usually these areas will coincide with FHA's Title VI defense housing areas—2) result in an increased number of habitable rooms or dwelling units which 3) will be suitable in location and in rent or price for defense workers and 4) be reserved for occupancy by defense workers.

DEFENSE STORES

Commercial construction entered the building-for-defense picture last month when Federal Work Administrator Carmody announced that provisions for the butcher, the baker, the 5 and 10 cent store, the beautician and other retail and service shops are being made in scores of large projects built under the Federal defense housing program. Where projects are remote from established shopping centers and where private interests fail to provide new nearby shopping facilities, Government will lease or sell land within some of the communities for this purpose. Prospective shopkeepers and service operators are advised to communicate with the managers of the local projects or directly with FWA's Division of Defense Housing in Washington D. C.

FEDERAL HOUSING TRENDS

Powerfully significant changes have recently been made in the execution of the Federal defense housing program. Government agencies which formerly played only a small part in the program or did not even exist, today are being assigned the bulk of the proposed projects. And, the costly cost-plus-fixed-fee form of con-

struction contract which was used for 114 of the 196 projects contracted for by the Federal Works Agency prior to July 1, has since been used only twice. The lump-sum form of contract is making a strong come-back.

Biggest frog in the Federal Works Agency's defense housing pond was once the Public Buildings Administration, which prior to July 1 had been assigned some 31,000 dwelling units, or 40 per cent of the 79,000 total then under FWA's supervision. The U. S. Housing Authority, which, unlike PBA, has always used local housing authorities as its construction agents and private local architects as its designers, on July 1 boasted the second largest participation in the program with 25,000 units, or about 31 per cent of the total. At the same time, the FWA's Division of Defense Housing, organized two months earlier to answer some of the public criticism leveled at PBA's inertia and disdain for prefabrication and private architectural assistance, was in charge of about 12,500 units, or 16 per cent of the program. The remaining 10,000 units (about 13 per cent) were divided among six other agencies: FWA itself, Navy, Farm Security Administration, local housing authorities (without USHA assistance), Army and Tennessee Valley Authority.

During July and August, however, the distribution of proposed projects has not followed the pattern of earlier months. Thus, the two agencies which use private architects have come to the front at the expense of PBA:

	Projects	Units	% of Total
USHA	35	7,445	55
DDH	13	2,355	17
PBA	12	1,895	14
Navy	7	1,562	12
Local Auths.	1	350	2
TOTAL	68	13,607	100%

Since USHA, DDH and the local authorities all use local architects, about 75 per cent of all Federal defense housing

(Continued on page 8)

Kawneer SERVICE

WILL BE MAINTAINED
to the very best of our ability!

In these unusual times, The Kawneer Company is fulfilling its obligations to the national defense program, as well as those to architects, builders, and sales representatives.

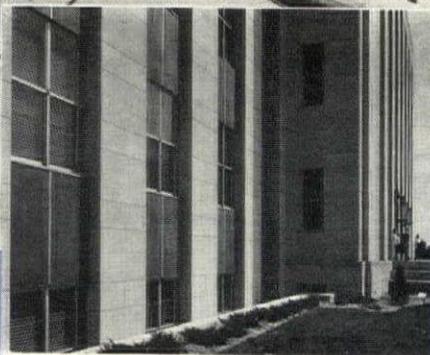
Kawneer is making vital parts for bombers, pursuit planes, and army trucks. Shortages are developing in certain metals. But, in spite of these limitations, Kawneer service will be maintained — your requirements will receive the best attention we can possibly give them.



E. Musson Sharpe, Arch.

STORE FRONTS

Practically all stainless steel and aluminum is now being used for defense work. The best possibility lies in the use of bronze — the original store front metal, beautiful and durable. The use of rolled construction is also suggested, not only because it is the most efficient, but also because extruded shapes are not available.



United Benefit Life Insurance Co., Omaha.
Tinsley McBroon & Higgins, Arch.

ALUMINUM WINDOWS

Because of priorities on extruded aluminum, Kawneer has discontinued the manufacture of Sealair All-Aluminum Windows. The fact remains that this type of window, pioneered by Kawneer, earned tremendous acceptance in a few years' time — will again become a major factor in both residential and other types of buildings.

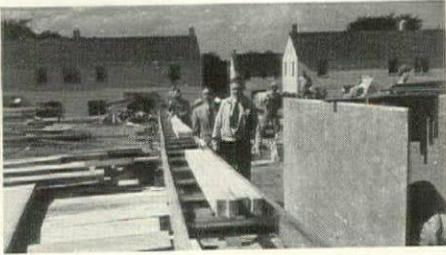
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BUILDING FOR DEFENSE

PRODUCTION TRICKS SPEED DEFENSE HOUSING



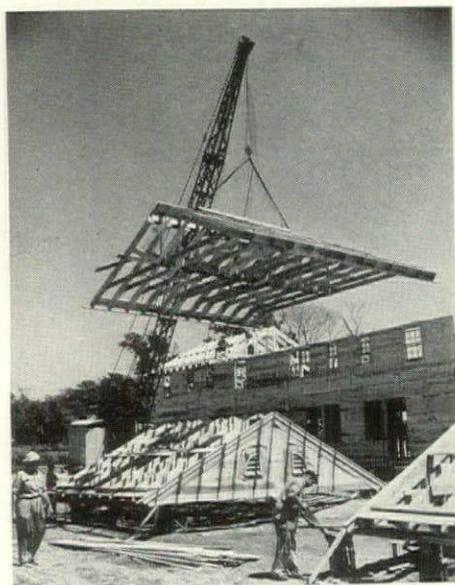
Conveyor at 538-unit Newport, R. I. USHA project delivers pre-cut lumber to jig tables where wall frames are fabricated.



Floor-wall hinge aligns prefabricated wall section, facilitates its erection, is later removed.



An entire wall for the second story of a four-family building goes up with a push by a score of workmen.



Roof framing is meanwhile assembled on the ground, raised into place in four sections by a giant crane.

(Continued from page 6)

units allocated during July and August will benefit from private professional talents. (For some results of this procedure, see p. 211, et seq.) And, more than half (1,235) of all units assigned to the DDH during these two months (roughly 10 per cent of the total number assigned to all five agencies) will be prefabricated.

FEDERAL HOUSING STATUS

Including the housing discussed above, the 15,000 dwelling unit Navy program and the 3,000 unit Defense Homes Corp. (RFC-FHA) program, a total of 111,545 regular family dwelling units had been allocated by the Government to its various construction agencies as of August 30. Of this number, 32,432 were completed, and another 51,103 were under construction contract but incomplete.

In addition, Government has allocated 2,545 dormitory units for single persons, 1,730 of which were complete, 420 under contract. Moreover, 4,254 trailer family dwelling units had been allocated to the Farm Security Administration which at August's end had put 1,675 to use, had 21,159 more on order. Finally, FSA had been allocated 7,046 trailer units for single persons, 3,201 of which were in place, 2,273 on order.

If the regular family units, dormitory units, family trailers and single person trailers are added together, the status of the total Federal defense housing program (in dwelling units) looks like this:

Total allocated	125,390	100%
Completed	39,038	31%
Under contract (incomplete)	55,955	45%
Not under contract	30,397	24%

This is what the U. S. had to show last month for the \$480 million of defense housing funds it began spending and lending almost a year ago.

8 HOUR DAY STRETCHED

By Executive Order at mid-August the eight-hour day was suspended for all construction mechanics and laborers employed directly by the War Department. Reason: to speed the completion of some military construction projects. Effect: small—practically all defense construction labor is employed by private contractors who, in turn, are employed by the Government. At the time of the Order, only about 100,000 of the 400,000 construction workers on Government financed projects were employed by the Army.

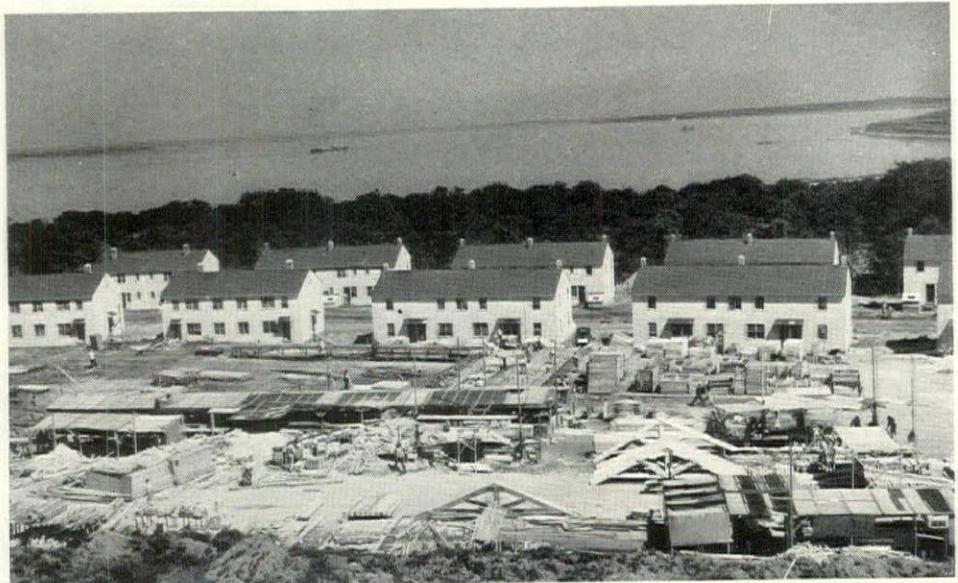
DEMOUNTABLE SCHOOLS

It is quite logical that the children of families which live in temporary demountable defense houses should be temporarily educated in demountable schools. With the passing of the emergency and the shutting off of temporary defense employment sources, the school buildings could be folded up along with the houses and moved to more populous neighborhoods.

Last month the U. S. Office of Education of the Federal Security Agency recognized this logical argument by issuing its Circular No. 201, a thin, paperbound pamphlet entitled "Modern Demountable Construction for School Buildings." Edited by Senior Specialist Alice Barrows in School Building Problems and with a foreword by Assistant U. S. Commissioner of Education Bess Goodykoontz, the document leans heavily on the already published works of Chief A. C. Shire of the U. S. Housing Authority's Technical Division.

At the close of a brief discussion of the practicability of prefabricated demountable construction for school buildings and the long-advocated "general principles

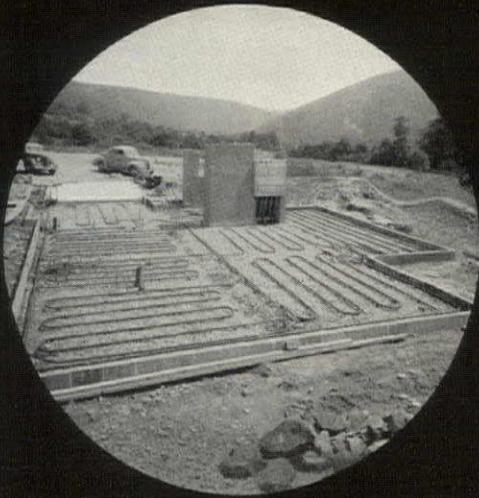
(Continued on page 62)



Completed buildings on the attractive Rhode Island site form a backdrop for the site-pre-fabrication machinery. Long canvas-covered platform is a huge jib table. Architects: Howe & Prout of Providence. Contractor: M. Spinnelli & Sons of Boston.

USHA-Esper Photos

How does RADIANT HEATING

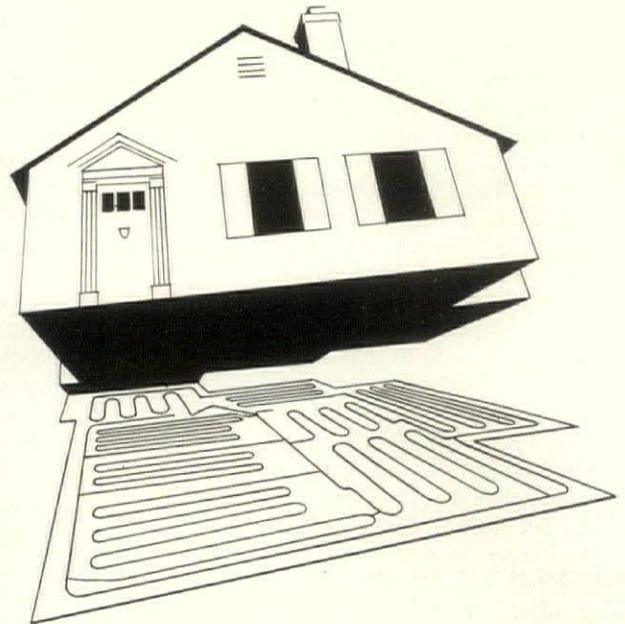


fit into

the

LOW COST

SMALL HOME picture?



Since heating is one of the largest single items of expense in the low-cost small home, many architects working on this problem have asked if radiant heating can be considered. The answer is definitely "yes."

WHAT ABOUT INSTALLATION COST? Data recently obtained on ten radiant heated homes, ranging in price from \$4800 (three in this group) up to \$7000, revealed that the highest percentage of total cost paid for the complete heating installation, was under 9%, the lowest somewhat over 7%, and the average 8%. Radiant heating costs no more, these figures indicate, than any other quality heating system.

WHAT ABOUT OPERATING EXPENSE? Reported experiences indicate that radiant heating brings definite fuel economies. One user reported bills averaging 38% lower than those of occupants in similar homes heated with other systems. Another user reports fuel bills, for an unusually severe 7 months heating season, averaging only \$8.35 a month for natural gas.

WHAT ABOUT CONSTRUCTION PROBLEMS? Since the accepted starting-point in low-cost housing is generally a one-story style structure, starting at grade, radiant heating can usually be installed with no trouble or complications. After the gravel bed—necessary in

any event—is laid, coils are placed, and the concrete topping poured.

WHAT ABOUT MATERIALS? Since the whole future of radiant heating depends on the continued satisfaction of present users, material selection is highly important. Piping must be resistant to corrosion both within and without . . . must have proper thermal properties, including coefficients of expansion approximating those of the surrounding materials, and good radiating characteristics . . . and must be easily, inexpensively fabricated. From many years of experience in situations where similar needs existed, we can unhesitatingly recommend Byers Wrought Iron as meeting these requirements. For the complete technical story, send for our bulletin, "Byers Wrought Iron for Radiant Heating Installations."

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

BYERS WROUGHT IRON

FOR EXTRA SERVICE
IN CORROSIVE APPLICATIONS

CORROSION COSTS YOU MORE THAN WROUGHT IRON

THE MONTH IN BUILDING

TRENDS BY CITIES

While building activity the country over is currently running about 35 per cent ahead of last year and will wind up 1941 with an officially predicted gain of 50 per cent over 1940 (ARCH. FORUM, Sept. 1941, p. 2), the trend in the larger U. S. cities is less spectacular. Thus, at August's end total 1941 building activity in 23 of the largest cities measured only 25 per cent higher than in 1940 (\$26 million vs. \$498 million), gave emphasis to the fact that much of the national defense construction program has been allocated to the comparatively small communities. Indeed, New York, which always accounts for more building than any other city, built only \$156 million worth in the first seven months—\$1 million less than in the comparable 1940 period. And, three other cities look longingly back at last year: Atlanta, down 43 per cent; Pittsburgh, down 9 per cent, and Miami, down 6 per cent.

On the other hand, all of the increases were substantial. Portland, Ore. with \$16 million of building during the first seven months and Buffalo with \$6 million both advanced about 175 per

cent. San Francisco (\$26 million) and Seattle (\$20 million) were up about 145 per cent. Other leaders include St. Louis, up 80 per cent to \$16 million; Milwaukee, up 65 per cent to \$11 million; Baltimore, up 60 per cent to \$26 million; Boston and Chicago up 50 per cent to \$13 million and \$50 million, respectively. Los Angeles, the second most important building center with \$65 million, was up about 45 per cent, topping the remaining group of cities which advanced less than 50 per cent: Houston, Cincinnati, Minneapolis, Detroit, Cleveland, Washington, New Orleans, Philadelphia, and Denver (listed in descending order).

Only five of the 23 cities in the compilation registered decreased residential building activity during the initial seven months of 1941: Atlanta, Baltimore, Houston, New Orleans and New York. Atlanta, again, and five others were set back on the non-residential front: Boston, Cincinnati, Denver, Philadelphia and Pittsburgh. Nine of the 23 cities reported decreased activity in additions, alterations and repairs.

MARBLE TO SHIPS

Many plants, machines and mechanics have been diverted from their accustomed peacetime operations to entirely different defense production assignments, but no case to date is as interesting as that of Building's marble trades. When the defense program was launched last year, Director Richard C. Brockway of the New York State Employment Service saw an opportunity to put New York City's marble cutters, carvers and setters to work—not in the marble trades which have long been dormant, but in shipbuilding. He noted that the cutters were experienced in laying out and developing full size "patterns" of voussoirs and other stone forms, that the shipbuilding industry used similarly developed "templates." Moreover, "stone lathe men" were known to be experienced in turning out large column shafts from blueprints with lathe tools which they themselves ground. They used calipers and other hand tools which also corresponded to those employed by machinist lathe operators of the shipbuilding industry.

After conferences with company officials, Brockway referred 46 marble workers to the Bethlehem Shipbuilding Co. which rejected only three, put the others through brief training courses (one to eight weeks) and then put them to work at shipbuilding trades closely related to their original skills. Since the original consignment, Bethlehem has put an additional 37 New York City marble men to work building its ships.

66 TO 100 DAYS

Despite complaints and delays occasioned by the difficulty in securing certain building materials, builders the country over are still producing a goodly number of privately financed houses in good time. During August, no less than 5,500 houses were started each week under the FHA mortgage insurance program, and at the

end of the month builders of FHA-insured houses were completing them within 66 to 100 working days (85 to 126 calendar days) of the commencement of construction.

Interested in determining just what effect material and equipment shortages were having on the speed of house construction, FHA at August's end spot-checked its program by questioning a representative sample of builders concerning the length of time required to complete new FHA houses. The answers:

	Work days	Cal. days
Atlanta	66	85
Chicago	70	88
Cleveland	99	126
Los Angeles	68	86
Portland, Ore.	100	126

Variations in the speed of construction reflect geographic differences in house types and construction systems as well as in climate and house sizes. (In 1939 the average FHA house contained 5.2 rooms, sold for \$5,352, including lot.) And, they may also reflect to a minor extent the relative difficulty of obtaining materials. However, in the spot-checked communities, where privately built houses were being completed within periods of from two to four months, it is apparent that the material shortage problem at the end of August was still far from acute.

INSTALLMENT BUYING CURB

As predicted (ARCH. FORUM, Sept. 1941, p. 2), the curb which the Federal Reserve Board month ago placed on installment buying in an effort to curb inflation has but little effect on the FHA program and the Building Industry in general. Scot free went the entire Title II part of the FHA program under which the mortgage insurance agency does the bulk of its business; and the Title I part of the program was tampered with only to a minor extent.

Thus, modernization and repair loans of less than \$1,000 in non-defense areas are limited to an amortization period of eighteen months (as compared with the FHA maxima of 36-60 months), and credit may not be extended beyond 80 per cent of cost for such items as stoves, ranges, space heaters and room air conditioning units. For furnaces, water heaters, water pumps, plumbing fixtures, complete air conditioning systems and attic fans the latter figure was set at 85 per cent of cost.

There are, however, two loopholes in the home repair and modernization regulations which exempt from the installment buying curb 1) any Title I loan which the Defense Housing Coordinator designates as necessary and 2) any Title I loan in excess of \$1,000 provided less than half of it covers the cost of the restricted items of household equipment mentioned above. Since the conversion of a one-family house into a two-or-more-family house usually entails an expenditure of more than \$1,000 and since these equipment items ordinarily run well below 50 per cent of the total cost, this type of remodeling is outside the clutches of the installment buying curb, is currently being pushed by FHA and the Home Owners' Loan Corp. as an important national defense measure (see p. 6, col. 1).

Biggest bombshell burst in the building industry by the FRB installment buying curb was the limiting to a term of only 18 months second mortgages of less than \$1,000. This may put a crimp in the marketing of uninsured moderate-to-low cost houses.

NAZI SUBSTITUTES

In at least one respect the U. S. economy of 1941 resembles the Nazi economy of 1937-38: armament production is beginning to boom and is requiring that the building industry sacrifice some of its
(Continued on page 70)

Penberthy

**A DISTINGUISHED NAME . . .
A DISTINGUISHED PRODUCT**

*Constructed of Copper
and Bronze Throughout*

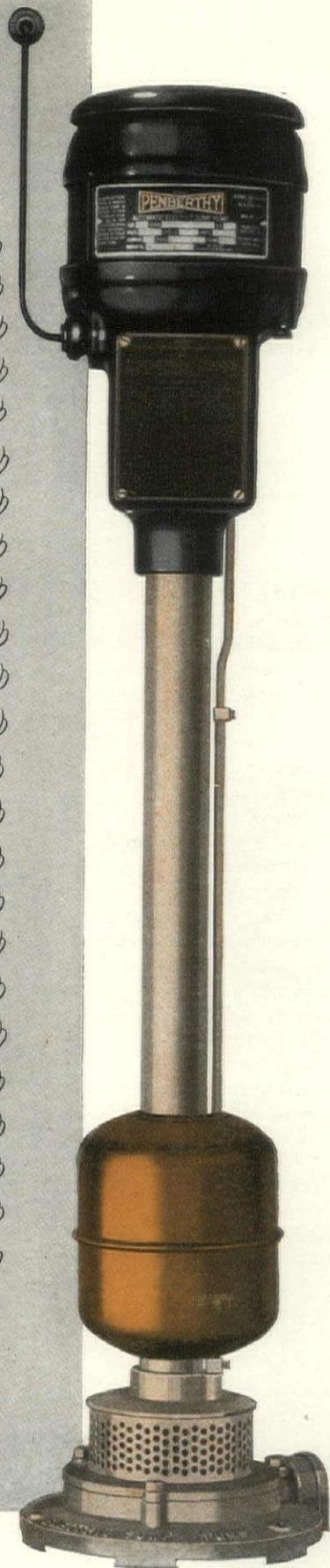
THE name "Penberthy" has been distinguished for fifty-two years as representative of highest quality products.

Penberthy Automatic Electric Sump Pumps are distinguished for their dependability and long life wherever seepage water accumulates.

Penberthy Automatic Electric Sump Pumps are available in six sizes.

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PENBERTHY
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PENBERTHY INJECTOR COMPANY

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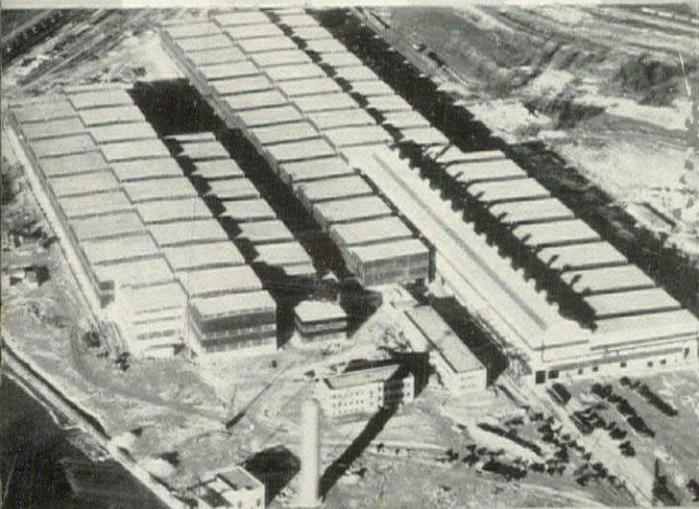
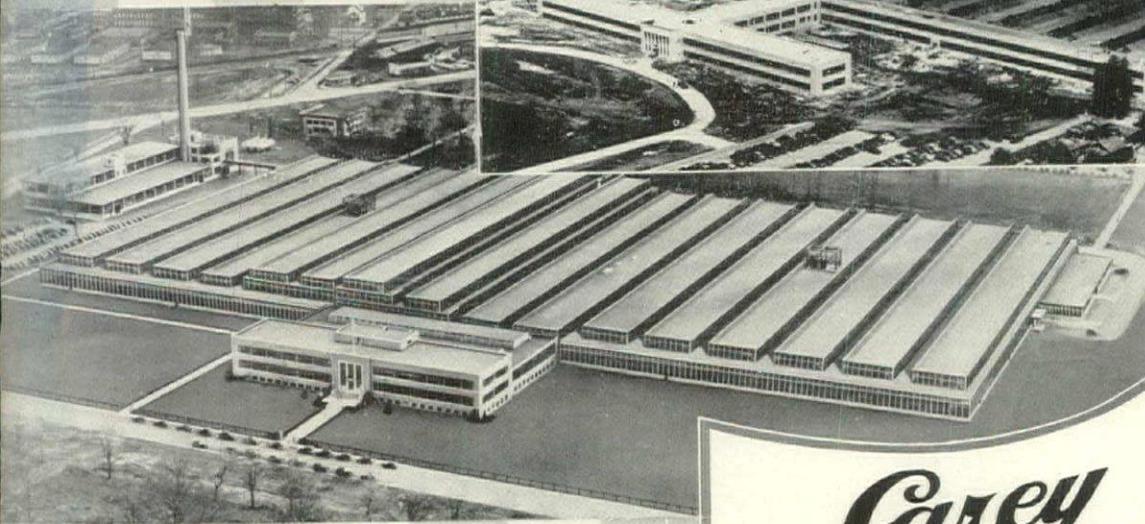
DETROIT, MICHIGAN

ROOFS OVER AMERICA!

Below:
Pratt & Whitney - Division
Miles - Bement - Pond, West
Hartford, Conn. Architects:
Albert Kahn.



America's Largest Single Story Industrial Plant. Wright Aeronautical Corp., Lockland, Ohio, covers 50 acres. Albert Kahn-Associated Architects & Engineers, Inc.



World's Largest Strip Mill, covering
18½ acres.



Above: The Rath Packing Co., Waterloo,
Iowa. Bert Tucker, Waterloo - Roofing
Contractor.

Industrial Rayon
Corp., Painesville, O.
Architects: Wilbur
Watson & Associates.



Carey BUILT-UP ROOFS

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The architect knows—industry knows—that CAREY Roofs make good. Most CAREY Roofs far outlive their bonded life. Many have doubled their service guarantee and are still on the job. The real reason for this exceptional service is simple and logical—over a half century of manufacturing experience, supported by serious scientific research.

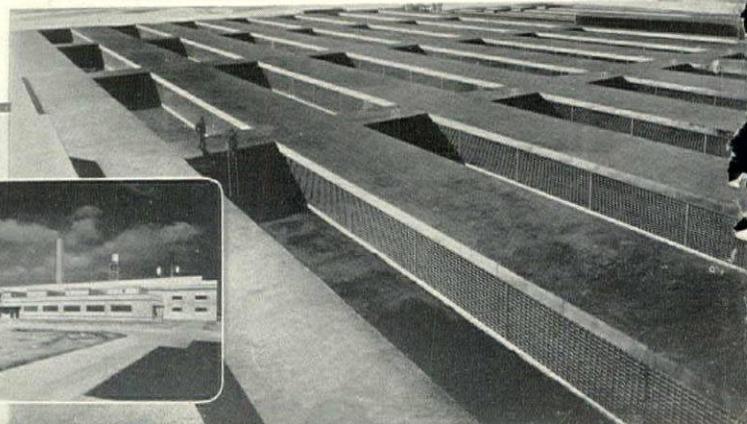
Research, with CAREY, has never been "window dressing". For years, CAREY has supported a research fellowship at the great Mellon Institute, University of Pittsburgh. And CAREY maintains, at its home plant, one of the best-equipped and best-manned research laboratories in the country, devoted to the betterment of roofings and other building materials. As a result of this research, numerous U. S. Patents have been issued, covering basic improvements in roofing materials and their method of production. The practical story of this progress is being told in longer wear and more economical service, on roofs all over America.

In these days of defense activity, when dependable roof protection assumes a new importance, you can serve your clients advantageously by specifying CAREY Roofs. A nation-wide organization of experienced roofing contractors is at your call. Write for Specification Book. Address Dept. 20.

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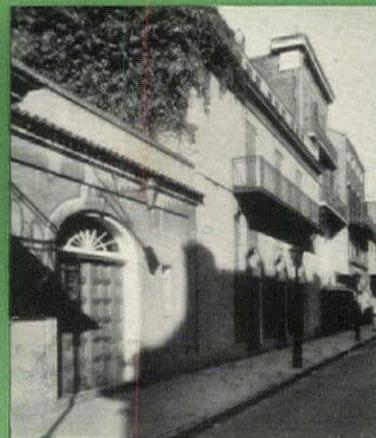
OUTDOOR ILLUMINATION, with inexpensive floodlights concealed in the trees, makes this garden and terrace charming and useful for summer evenings. Bryant weather-proof outdoor sockets and wiring devices give added protection for such installations.



MODERN KITCHEN PLANNING brings this convenient arrangement of range, refrigerator and work space in this Westinghouse-designed kitchen. You'll find useful our "Kitchen Planning Booklet," available from any Westinghouse office.



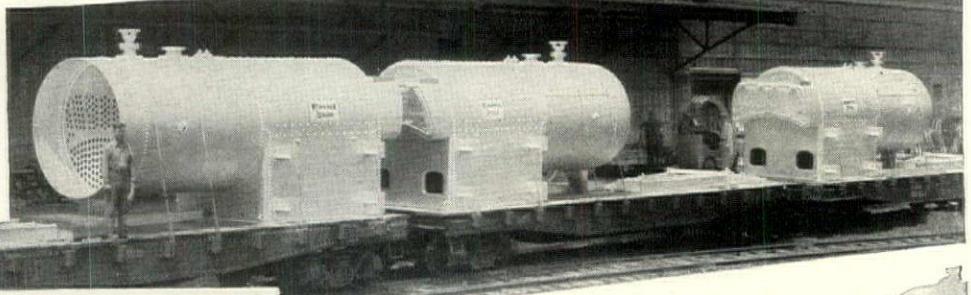
ELECTRIC AIR CLEANING in this modern office building provides more healthful working conditions, protects interior decorations, documents, pictures and other contents from dust, dirt and grime, reduces maintenance and cleaning costs. Supplied by Westinghouse *Precipitron*.



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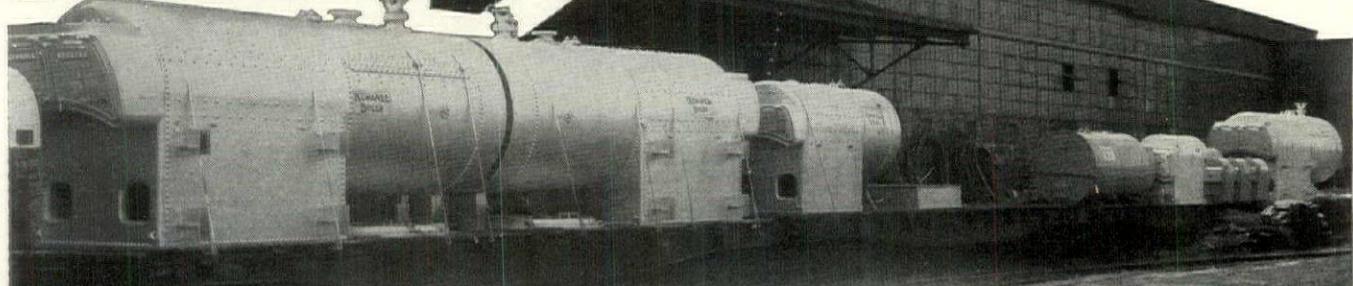
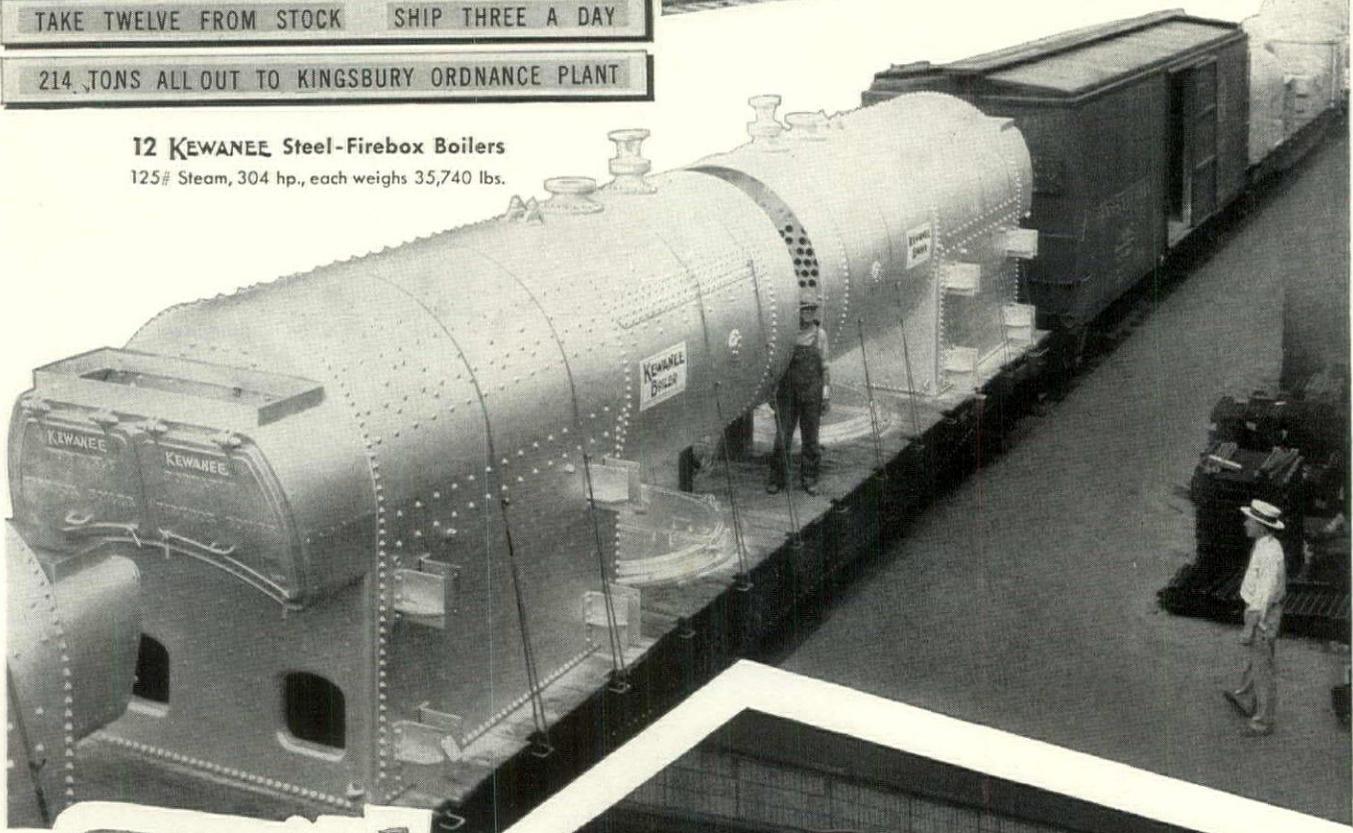


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TAKE TWELVE FROM STOCK SHIP THREE A DAY
 214 TONS ALL OUT TO KINGSBURY ORDNANCE PLANT

12 Kewanee Steel-Firebox Boilers
 125# Steam, 304 hp., each weighs 35,740 lbs.

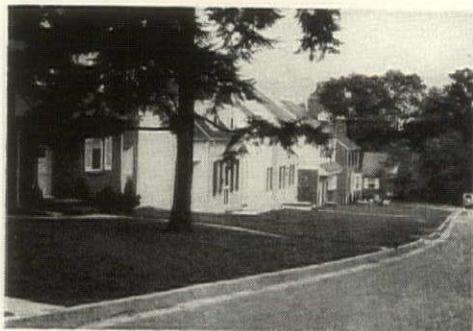


KEWANEE BOILER CORPORATION
 KEWANEE, ILLINOIS

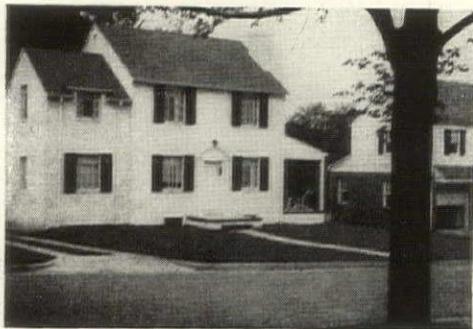
ALL OUT DEFENSE SERIES



1. "We have built and sold 54 General Electric equipped homes in the last eighteen months", says Bill Watkins, President of The Tanglewood Development Co., prominent Maryland builders. He adds . . .



2. "The name 'General Electric' has a powerful sales appeal — erases all doubt in prospects' minds as to quality of our homes." Above is typical row of Tanglewood houses that sold like hot cakes.



3. Close-up of one of the Tanglewood houses, featuring General Electric heating equipment, wiring system and all-steel kitchen cabinets. Take a tip from Bill Watkins — use General Electric equipment, and .



4. . . . sell more houses! Harford Oaks, Watkins' new development, will be completely G-E equipped, including General Electric Kitchen appliances. Note the sign above. You, too, can cash on public acceptance for G-E!

SUCCESS STORY With Proof!

THE TANGLEWOOD DEVELOPMENT CO.
DEVELOPERS AND BUILDERS

Phone: CATONSVILLE 178-J
1010

"Tanglewood"
PARADISE AVENUE
CATONSVILLE, MD.

September 5th, 1941.

8 CROMARTY ROAD
BALTIMORE, MD.

Mr. H. C. Maccubbin;
General Electric Home Bureau,
1405 Locust St.
Philadelphia, Pa.

Dear Mac:

Eighteen months ago we opened our development, "Tanglewood" - featuring General Electric heating, wiring, and metal cabinets. The results have been far beyond our expectations inasmuch as we have built and sold 54 homes; most of them sold before they were under roof. We have found that the name General Electric has a powerful sales appeal, and erases all doubt from the prospects mind as to the quality of our homes.

On the basis of the above results, our two new properties, "Briarwood" and "Harford Oaks" will be completely GE equip; heating, wiring with "Mercury switches" and kitchen equipment. We are sure that the results at these properties will be as satisfactory as at "Tanglewood".

May we take this opportunity to express our appreciation for the many helpful suggestions advanced, and the sincere cooperation given by your company.

Very sincerely yours,

The Tanglewood Development Company,

By:

Wm. B. Watkins, Pres.

WBW/w.-p

Mail The Coupon Today

You should have all the facts on the General Electric Home Bureau's complete House Merchandising Plan (see last paragraph of above letter). Here's a free service that includes architectural engineering, promotional and advertising aids. The coupon will bring you complete information without obligation. Mail it today!

General Electric Home Bureau
Dept. HB-12110

1285 Boston Ave., Bridgeport, Conn.

Please send information on House Merchandising Plan

I am a builder for resale

I am an Architect

I am building my own home

Name.....

Address.....

City.....State.....County.....

GENERAL ELECTRIC

NO.

7

ALUMINUM,
DEFENSE,
AND YOU

THE TIMETABLE OF ALUMINUM FOR DEFENSE
up to September 10, 1941

1938 Sept. *Munich.*

Oct. *Czechoslovakia invaded.*

Nov. Alcoa inaugurates \$26,000,000 expansion program.

Dec. Alcoa produced 287 million pounds in 1938; had more than a year's supply on hand.

1939 Jan. New extrusion and tube mill begins operation at Lafayette, Ind.

Feb. Start building an excess stock pile of airplane sheet.

Mar. *Bohemia and Moravia occupied.*

Apr. *Albania invaded; Congress authorizes Army to acquire 6,000 planes by July, '41, and Navy 3,000 by '44. Aluminum for all these would take about two months 1941 production.*

Sept. *Poland invaded; U. S. Neutrality proclaimed; limited National emergency proclaimed.*

Alcoa authorizes new metal-producing capacity at Alcoa, Tenn.

Nov. *Finland invaded; Cash-and-carry act signed.*

Alcoa completes \$26,000,000 expansion program, begins plans for a larger one.

Dec. *U. S. protests blockade of German exports.*

New metal-producing plant authorized at Vancouver, Wash.

1939 production 327 million pounds; 215 million on hand.

1940 Jan. *First request for defense appropriation in Budget Message.*

Alcoa announces \$30,000,000 more plant expansion.

Mar. Alcoa reduces price of aluminum from 20c to 19c, starts construction of Vancouver, Wash., plant.

Apr. *Denmark and Norway invaded.*

May *Low countries invaded; National Defense Advisory Commission named.*

New metal-producing unit begins operation at Alcoa, Tenn.

June *Dunkerque; France capitulates.*

Additional metal-producing unit authorized at Alcoa, Tenn.

July *Congress lifts previous limits on numbers of planes.*

Aug. *Air offensive against England begins; 50 destroyers exchanged for island air bases.*

Alcoa reduces price of aluminum ingot from 19c to 18c; capacity for making alumina increased.

Sept. *Egypt invaded; Selective Service Bill passed.*

First metal manufactured at Vancouver, Wash., plant and new units for additional capacity authorized.

1938

1939

1940

- Oct. *Rumania invaded.*
Alcoa authorizes another \$150,000,000 for expansion.
- Nov. *26 bombers on contract turned over to Britain.*
Alcoa reduces ingot price from 18c to 17c; additional capacity authorized at Badin.
- Dec. Alcoa 1940 production 413 million pounds; 154 million on hand.
- 1941 Jan. *OPM established; NDAC says aluminum supply adequate to meet October, 1940, estimates of requirements.*
Alcoa authorizes additional capacity at Alcoa, Tenn.
- Feb. *Aluminum put on priorities.*
- Mar. *Lend-lease bill signed.*
Alcoa produces 44,000,000 pounds of metal this month.
- Apr. *Yugoslavia invaded; U. S. occupies Greenland.*
- May 150 million-pound-annual-capacity plant at Vancouver, Wash., completed and operating at capacity.
- June *Crete lost; Russia invaded.*
- July *New Government aluminum plants authorized; U. S. occupies Iceland; Japan moves into Indo-China.*
Alcoa produces 53,000,000 pounds this month; Badin unit authorized November, 1940 starts operation.

1941

- Aug. *U. S. Government announces Aluminum Company of America will build and operate 3 Government-owned aluminum smelting plants and one for making alumina.*
Alcoa announces ingot price reduction to 15c, effective October 1, 1941.
Alcoa and T. V. A. conclude agreement to unify two great hydro-electric power systems in the Tennessee Valley, which will add at least 200,000,000 pounds to America's annual aluminum producing capacity.
Alcoa produces 54,000,000 pounds of aluminum this month.
- Sept. Sites selected for two of the Government-owned aluminum plants and for the alumina plant; railroad, water, and sewage facilities provided; construction contracts being executed.
Alcoa starts construction of 325,000,000 pounds per year additional alumina producing capacity at its own Mobile plant; construction started on additional capacity for 22 million pounds of aluminum fluoride, and 23 million pounds of cryolite annually at East St. Louis; eight new extrusion presses purchased to bring expansion up to 238% of pre-war capacity.
Excess stock pile of aluminum airplane sheet started in February, 1939, being maintained at 5,000,000 pounds.



★

ALUMINUM COMPANY OF AMERICA



GOLD BOND ACOUSTIMETAL, selected for the ceilings of J. S. Bache's Chicago Office in the Field Building, is the finest sound corrective money can buy . . . with an AMA coefficient of .99 at 512 cycles! Acoustimetal meets engineers' specifications for indirect lighting—is fireproof, vermin-proof, replaceable, easily cleaned and practically indestructible.

Architect, Paul B. Stevens, Jr.—Acoustical Distributor, Fisher Busse Co.



INVESTMENT EXPERTS PREFER GOLD BOND SOUND CONTROL

WHETHER you're buying stocks or sound control materials, there is no substitute for expert advice. So it was natural for J. S. Bache & Co., one of America's leading security dealers, to call on Gold Bond Acoustical research and service for the best methods of quieting nerve-shaking noise in their busy Chicago offices.

Every day Gold Bond is solving new acoustical problems—in offices, hospitals, apartments, auditoriums, U. S. Army arsenals, and a score of other fields. This same Gold Bond acoustical research and service is ready to help you get the right answer to your sound control problems, too—with a complete line of products and a carefully selected organization of Acoustical Distributors that will supervise

installation—and guarantee results.

Gold Bond First With the Best

This is only one example of the careful research and efficient service that has made National Gypsum Company the world's largest exclusive manufacturer of wall and ceiling materials. Gold Bond sets the standards for the industry with more than 150 better products for every interior—including plaster, lime, wallboard, gypsum and metal lath, wall paint, insulation and sound control materials. 21 modern Gold Bond plants, 300 trained Gold Bond representatives, and 10,000 dependable Gold Bond dealers are ready to serve architects and builders everywhere. And when you specify Gold Bond exclusively, you get—not a hit or miss assortment of various brands—but

the responsibility for all wall and ceiling products centered with a single reliable manufacturer.

Consult Sweet's Acoustical Section, or write today for standard file giving detailed specifications on all Gold Bond sound control products. SOUND CONTROL DIVISION, NATIONAL GYPSUM COMPANY, BUFFALO, NEW YORK.



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NEW YORK, N. Y. . . . CLARENCE CENTER, N. Y. . . . AKRON, N. Y. . . . PORTSMOUTH, N. H. . . . NATIONAL CITY, MICH. . . . FORT DODGE, IA.
MEDICINE LODGE, KAN. . . . ROTAN, TEX. . . . SAVANNAH, GA. . . . LUCKEY, O. . . . BELLEFONTE, PA. . . . YORK, PA. . . . ORANDA VA.
SALTVILLE, VA. . . . NILES, O. . . . MOBILE, ALA. . . . NEWBURGH, N. Y. . . . ALEXANDRIA, IND. . . . DUBUQUE, IA. . . . DOVER, N. J.

ANACONDA WIRE & CABLE COMPANY
INTER-OFFICE CORRESPONDENCE

New York, September 1941

To: Advertising Department
From: Vice-President's Office
Subject: Advertising - 1941
Referring to: National Defense
File Reference: WES

In line with our recent conversation will you work up ads explaining to our customers the effect of national defense on our regular business. These ads must emphasize:

1. Our true appreciation of customers who have helped us build our business in the past.
2. Our trust in their appreciation that we must make the defense program our first job; explain all copper is now allocated by OPM and use of rubber is restricted.
3. Our regret that we cannot keep them supplied as we would like because of the defense program.
4. Our sincere effort to maintain customer good will so that we all may benefit when the emergency is over.

Remind everyone of this, too. No matter how long the emergency, our research laboratories will carry on in the same way as always. We'll be making product improvements, developing new and better products to the end that when it's all over, our customers and ourselves will reap the benefits of this work.

*AWS
This says
everything -
let's make
it ad #1 EFL*

- J -

41375

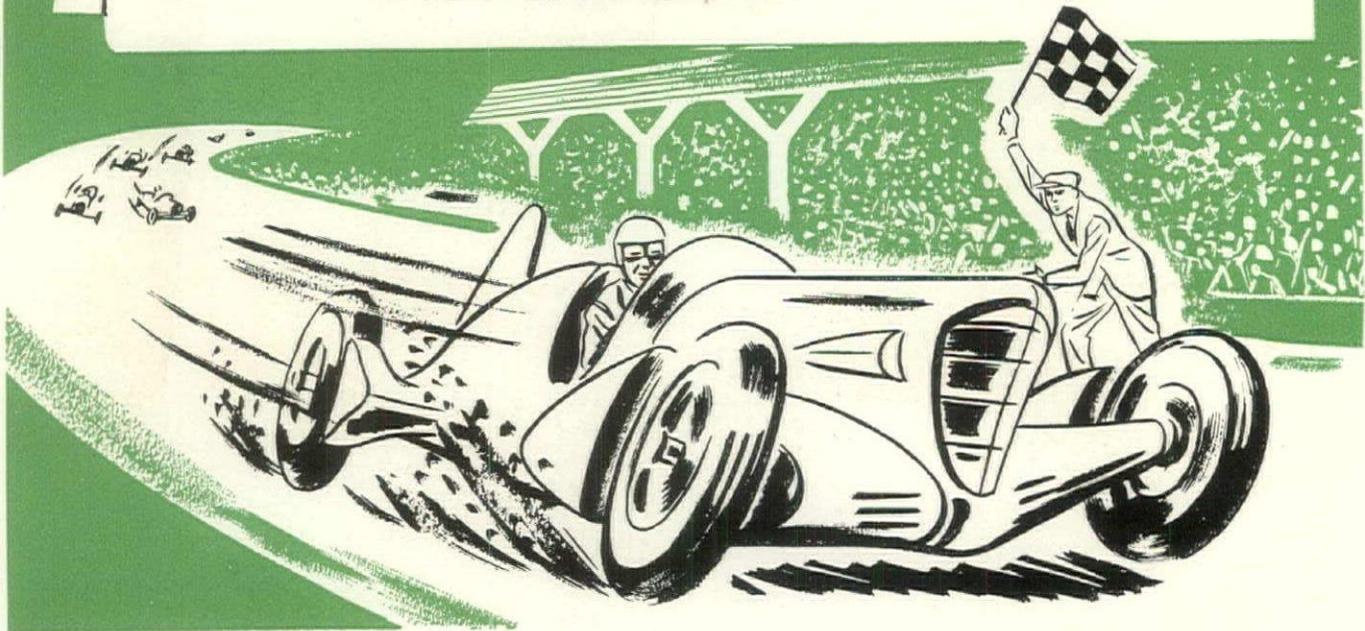
Anaconda Wire and Cable

Anaconda Wire & Cable Company, General Offices: 25 Broadway, New York City
Chicago Office: 20 No. Wacker Drive • Subsidiary of Anaconda Copper Mining Company
Sales Offices in Principal Cities





Products have paced the PROGRESS OF PLUMBING



FOR more than a quarter century JOSAM has been contributing constructive ideas and developments that have materially stepped up the advance of the plumbing industry.

In 1914 JOSAM pioneering produced the Double Drainage Drain, an exclusive item which solved the problem of leakage around drains.

In 1916 the JOSAM Roof Drain, with removable combined dome strainer and sediment cup, revolutionized drainage practice for every type of roof.

In 1925 JOSAM contributed the Josam Grease Interceptor, designed to prevent grease and fats from entering drainage lines. Shortly afterward followed practical interceptors for preventing hair, plaster and metal from entering the drainage lines.

In 1926 development of the Swimming Pool Walkway and Main Outlet Drains and supply inlet fittings was completed.

In 1927 JOSAM introduced the Non-Clog Triple Drainage Drain which for the first time provided full protection against damage resulting from clogged drains.

In 1929 JOSAM pioneering developed the Josam

Shock Absorber, which eliminates the din and destructiveness of Water Hammer in water supply lines.

In 1930 the JOSAM Gas-Oil Interceptor was developed to prevent oil, gasoline and other volatile, flammable liquids from entering drain lines.

In 1936 the JOSAM Ejector circulating system followed with other equipment that meets every requirement of modern swimming pool sanitation.

In 1938 came the Moderator Mixing Valve . . . JOSAM again leading the industry in making showers absolutely safe against the danger of accidental scalding.

Over the years thousands of items have been added so that today the JOSAM line is the largest and most complete of its kind in the world—covering the drainage requirements of every type of building from roof to basement.

These are the milestones in the progress of plumbing set by JOSAM. More are to come . . . *must come* . . . because leadership imposes the responsibility of not only moving forward but always keeping a lap or more ahead. JOSAM accepts that responsibility . . . pledges all its engineering skill, research facilities and resources to continue to set the pace.

JOSAM MANUFACTURING COMPANY

Main Sales and Engineering Offices, EMPIRE BUILDING, CLEVELAND, OHIO

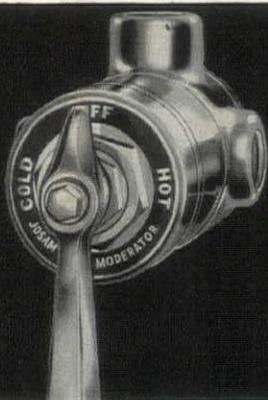
Factory and Foundry, Michigan City, Indiana

Representatives in all Principal Cities

WEST COAST MANUFACTURERS AND DISTRIBUTORS

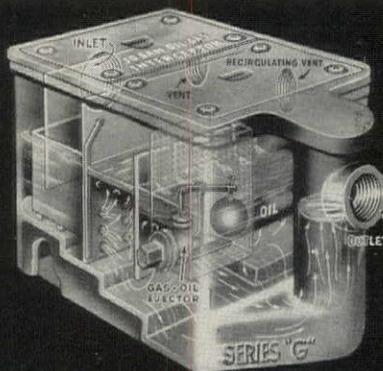
JOSAM-PACIFIC COMPANY, 765 Folsom Street, San Francisco, Cal.

Important *Josam* contributions to MODERN PLUMBING PRACTICE



MODERATOR MIXING VALVE

The only mixing valve of its kind. Positively prevents accidental scalding in showers. Instantly shuts off hot water automatically before it reaches shower head if cold water supply partially or completely fails. One handle controls both hot and cold water.

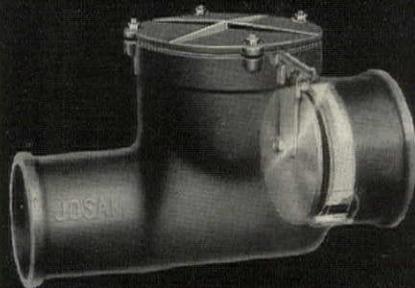


GAS-OIL INTERCEPTOR

Prevents oil, gasoline and other volatile liquids from entering waste lines . . . protects against fire, explosion and water pollution.

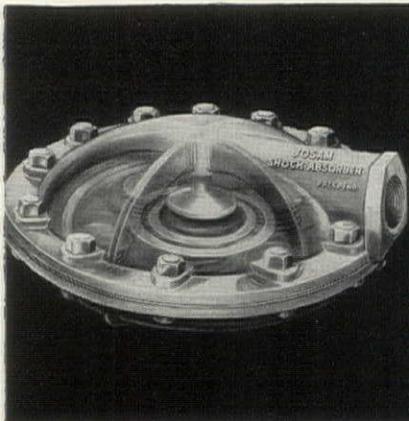
GREASE INTERCEPTOR

For effective removal of grease and fats from waste water. Prevents grease clogged drainage lines.



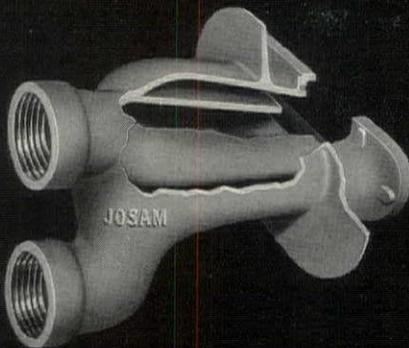
OPEN SEAT BACKWATER SEWER VALVE

Protects property, equipment and merchandise against damage by preventing backwater or sewage from entering basement. Works automatically in case of excessive rain, tide water or inadequate sewer carry-off.



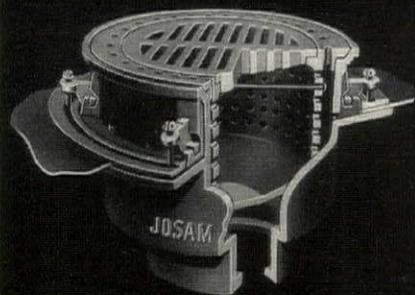
SHOCK ABSORBER TO ELIMINATE WATER HAMMER

Provides a positive, permanent way to eliminate disturbing and destructive Water Hammer in water supply lines. Quiets the irritating noise . . . prevents costly damage.



SWIMMING POOL EQUIPMENT

Complete drainage equipment to meet all state and municipal regulations. The ejector fitting shown above insures complete water circulation and perfect sanitation. Another exclusive JOSAM development.



NON-CLOG TRIPLE DRAINAGE DRAINS

Provide uninterrupted flow of debris-laden water at all times. Eliminate clogged drains, flooded floors and consequent damage. Even when removable sediment container, which catches solids, is completely filled drainage continues.

*Howdy! I'm
Slide rule Steve
I've got something
for you.*



It is a Manual of Specifications and Dimensions for Plumbing Drainage Systems . . . giving sample specifications for the drainage requirements for all types of buildings . . . all kinds of dimensional tables, charts and other useful information of immense value. Handy pocket size. The only book of its kind. Priced at \$1.00, but free to you if you mail the coupon.

JOSAM MANUFACTURING COMPANY, 301 Empire Bldg., Cleveland, Ohio

Send me copy of the Manual, free.

Send me literature on the following:

Moderator Mixing Valve

Gas-Oil Interceptor

Shock Absorber

Grease Interceptor

Open Seat Backwater Sewer Valve

Swimming Pool Equipment

Non-Clog Triple Drainage Drains

Name _____

Address _____

City _____

State _____

FILL OUT AND MAIL THE COUPON

MAKE THIS TEST -
Prove **BRIXMENT** *is* **BEST!**



1

"Cap" one brick with Brixment mortar (left), and one brick with mortar made with 50-50 cement and lime. After mortars have hardened, place both brick in a pan of shallow water. (Photo 1.)



2

Keep about an inch of water in the pan. Even if soluble salts are present in the brick or sand, you will soon be convinced that *Brixment mortar helps prevent efflorescence.* (Photo 2.)

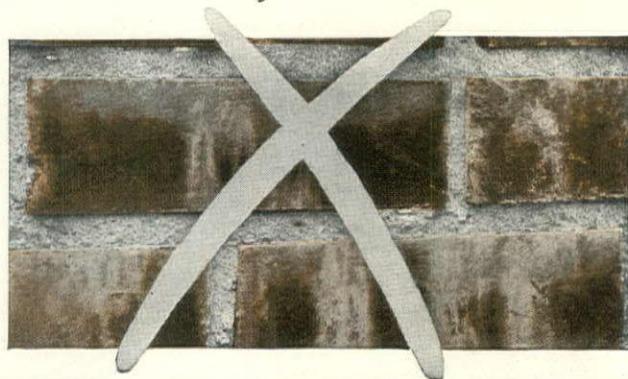
BRIXMENT *Helps* **Prevent EFFLORESCENCE!**

EFFLORESCENCE is an outcropping of minute white crystals on brickwork. When these crystals occur on colored mortar joints, the condition is sometimes mistaken for *fading*.

Efflorescence is caused by the presence of soluble salts in masonry materials. When reached by water, these salts dissolve, and are drawn by evaporation to the surface of the wall.

Brixment itself *does not cause efflorescence* because it is practically free from soluble salts. Even when such salts are present in the sand or brick, the waterproofing in Brixment mortar usually *prevents*

them from coming to the surface. . . . Bricklayers who have used Brixment mortar for years say they have far less efflorescence with Brixment mortar than with *any other kind.*



BRIXMENT

For Mortar and Stucco

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



THE SPENCER HEATING CLINIC

Continues to "War on Waste"

The Nation must conserve fuel and the first step to take regardless of all others, is to see that homes have efficient, modern, fuel-saving boilers. All other improvements to the house or heating system are mere half-way measures if the boiler is not right. For example:

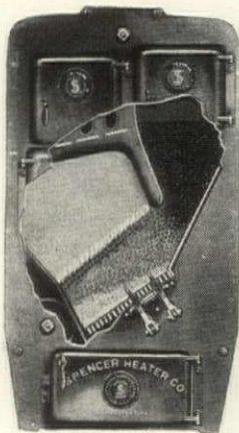


CASE . . . Middle-aged Mathematician is Committed to Insane Asylum

DIAGNOSIS . . . Seven companies each promised 25% fuel saving if their "device" or method was installed — a total of 175% saving. After practically rebuilding entire house (but no new boiler) man went crazy when total fuel saving amounted to \$6.75 at an installation cost of \$392.

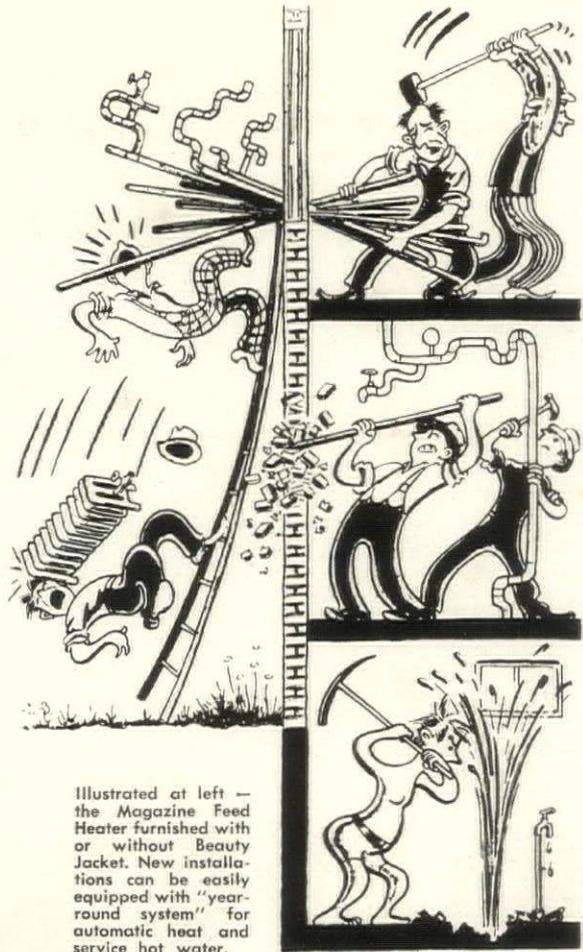
PRESCRIPTION . . . An outstanding example of fuel saving is the Spencer Magazine Feed Heater — the daddy of all automatic firing devices and still the great labor and fuel saver annually for thousands of new homes and buildings. It automatically stokes small sized, low-cost anthracite coal or coke without motors or moving parts.

No Spencer owner need fear a fuel shortage while enjoying effortless heat and big savings, because all modern Spencers — regardless of the type, can be quickly converted to burn the fuel available locally.



Spencer Boiler designs include the Beauty Jacketed "K" and "C" Series from 400 to 1950 feet (steam) for modern homes and the big Steel Tubular "A" Series ranging up to 42,500 feet. Send for catalogue.

SPENCER HEATERS
WILLIAMSPORT, PA.
DIVISION-AVIATION MANUFACTURING CORPORATION



Illustrated at left — the Magazine Feed Heater furnished with or without Beauty Jacket. New installations can be easily equipped with "year-round system" for automatic heat and service hot water.

SPENCER BOILERS

FOR EVERY TYPE OF BUILDING AND EVERY TYPE OF FUEL

LETTERS

PRIORITIES

Forum:

On my recent return to my desk from a long field trip I had the first opportunity to study the article on Priorities appearing in the August issue of ARCHITECTURAL FORUM.

Inasmuch as I have had much of the problem to contend with daily from a standpoint of materials, both basic and manufactured, in a number of industries. I am really amazed at the clarity and simple way in which you have been able to express it. . .

BRUCE A. WILSON

Greenfield, Detroit, Mich.

POST-WAR PATTERN

Forum:

Heartly congratulations to your "Building's Post-War Pattern!" It is a courageous deed and may become historical in our striving to shape the future living space of the people of the U. S.

There is, of course, much to say on what you have laid down in this building manifesto; however, in face of the grand feature of it, I do not like criticizing minor details but rather help you to anchor it in the heart and soul of the people. Aiming at this, I submit the following suggestions:

1. Your manifesto ought to be available as off-prints for special distribution. I—for instance—would like to have 50 copies of it for my students at Harvard in order to discuss all the problems touched in it with them very carefully. To catch the youth for your plan is important.

2. To discuss your plan exclusively in your magazine is not enough, I think. THE FORUM ought to prepare and convoke a special "Post-War Building Congress" in New York and let all the problems be discussed pro and con by pre-nominated experts of rank and authority.

3. The heel of Achilles in your manifesto, it seems to me, is the *financial* problem. How to finance the post-war building plan? You say: "It must be moved with big money, and a big part of it must necessarily be Federal." Maybe there will not be much Federal money available after this war is over and the U. S. will be confronted with the consolidation of her own indebtedness and of those of various other States all over the world (to say nothing of financing the world trade after the war!). I think it is the duty of the finance experts to find a scheme based on the pay-as-you-go principle and accordingly then, it ought to be the duty of the builders to propose only such plans that are profitable in themselves or, more than that, that *save* money and decrease the capital to be invested in the post-war building plan.

I know our architects and town-planners are not yet accustomed to think and to act this way, but the post-war time may force them to do it. On the other hand, I doubt if there are financiers who are capable of thinking out a productive finance plan fitting our building aims on their own part. Such a finance plan must be worked out in close collaboration by experienced and inventive financiers *and* builders.

MARTIN WAGNER

Cambridge, Mass.

Forum:

For a number of years THE FORUM has been impressing on its readers that the plan of a building should be the outgrowth of the actual requirements and not just an arbitrary form chosen for the sake of some preconceived notion. Likewise, the final form of the building should be the three dimensional expression of the plan. In other words, architectural form is generated, not imposed.

Starting from this principle, it seems to me that plans for society as a whole should operate in the same way. If they are not generated by popular feelings, popular beliefs, and popular actions of a neighbor-to-neighbor sort as well as by a planning board to planning board relationship, the whole effort of planning will be fruitless, or unfunctional. Either society would be stifled by the benevolent dictatorship of planners, or the much desired order would fail to come. . .

While planning is necessary and desirable, it is not the whole life of man. In its correlation of the various elements of society planning is, so to speak, horizontal. *Per contra*, a society where man is unimpeded by any conception of the good of the whole, where the devil takes the hindmost, is vertical in its effect. I would like to advance the suggestion that the good society exists only when these two forces are in fruitful tension.

. . . Before stating their aims, planners should pause and consider whether there is any possibility of accomplishing them. If they do not do this, they are not planners in any real sense of the word because planners must reckon, among other things, on the human material they will have at their disposal to carry out their plans. Furthermore, the consequences of bad planning can be frightful and, as we cannot expect more than a portion of our plans to be valid, must we not only be prepared in advance to do something about our mistakes? In those European countries which have "sold" the masses on planning without having the ability to retrieve their mistakes there has been only one answer, "liquidation" . . .

If we are going to plan, and it is high time, let us start planning via the home, the neighborhood, the school, the teacher's college, and not expect to achieve our ends by means of super organizations which should serve in a guiding and winnowing capacity, only. If we are able to teach the young that service to the public is more important than financial success, that in the conservation of national resources there is something more important than just making anything that will "sell;" if we show groups engaged in every form of enterprise the advantages of cooperative buying and selling; if we can do these things, we shall gradually develop a "cellular system" capable in time of wide scale planning. Without such a development all the planning in the world will not change the amorphous character of our society for the better. . .

WALTER KNIGHT STURGES

Columbus, Ohio

TRI-LEVEL HOMES

Forum:

. . . Favorable reaction to your presentation of our Tri-Level Homes in the September issue (p. 201) is by no means exclusively confined to ourselves, and I trust you may experience some measure of satisfaction to know we already have received many splendid letters, telegrams and even long-distant 'phone calls, congratulating us and expressing further interest in our program. The following letter is quite typical:

"I have just today received my September issue of THE ARCHITECTURAL FORUM and am fascinated with the write-up there-in of your Tri-Level houses.

"At last! something new in a floor plan for those in the lower salary bracket who have wanted variety and more livable space per dollar but, heretofore, have not been able to afford it . . . I am planning to build immediately four small houses to sell for \$4475. (Cost of each lot is \$575.) and will, I believe, toss my present floor plans into the wastebasket if I can obtain from you four sets of plans of the basic ground floor library-bedroom house. . ."

WALT B. DEGREE

Detroit, Mich.

WASHINGTON AIRPORT

Forum:

. . . Before expressing himself so authoritatively on the airport design it is unfortunate that Mr. Hudnut did not become thoroughly acquainted with the practical demands of the program and the mandatory requirements formulated by both the air lines and the Civil Aeronautics Authority.

(Continued on page 90)

MILLER LIGHTING for Defense

MORE THAN 100 MILES of IVANHOE "50 & 100 FOOT CANDLERS" are today speeding defense by providing better working light — in armories, arsenals, airplane and parts plants, in the factories of direct defense suppliers. Every single feature of this guaranteed and proven fluorescent lighting system makes direct, immediate contribution to the defense effort.

- ★ **HIGHER ILLUMINATION**—50 to 100 foot candles—for faster, better production—greater worker efficiency.
- ★ **30 TO 50% LOWER INSTALLATION COSTS**—Fixtures contain up to 80% of necessary conduit—makes defense dollars go further.
- ★ **FASTER INSTALLATION**—Steps up building schedules — plants get into production quicker.
- ★ **UNIFORM LIGHT DISTRIBUTION**—Production equipment can be moved at any time without necessity for changing lighting.
- ★ **SIMPLIFIED MAINTENANCE**—Easy to clean, removable porcelain-enameled reflectors—saves valuable man-hours for production.
- ★ **ALLOWANCE FOR FUTURE LIGHTING NEEDS**—Illumination increases up to 45% practical without new fixtures—low obsolescence factor.

With the need for night work growing still greater . . . with the heat on for faster and faster delivery of defense goods, IVANHOE "50 & 100 FOOT CANDLERS" become more than ever valuable defense weapons. If you, too, are serving for defense, perhaps we can help you.

The Miller Company, now serving for defense, stands ready to serve still further.

**PRESIDENT TO ASK
NEW ARMS FUNDS;
MORE NIGHT WORK**

From
N. Y. Times
Sept. 2nd

★★★★★
**IVANHOE
"50 FOOT CANDLER"
"100 FOOT CANDLER"
RLM Continuous
Wireway
FLUORESCENT
LIGHTING SYSTEM**

THE MILLER COMPANY
MERIDEN, CONN.

Pioneers in Good Lighting Since 1844

You can see this guaranteed and proven Fluorescent Lighting System at the Fluorescent Futurama visiting 14 leading cities.

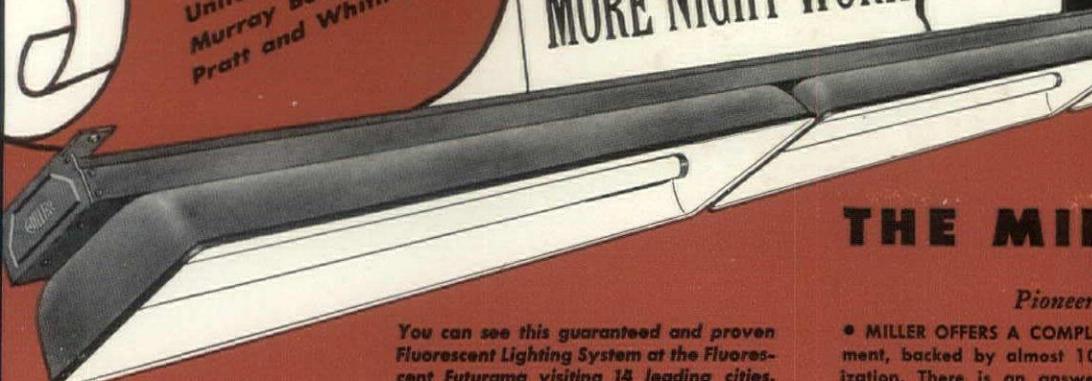
• MILLER OFFERS A COMPLETE LINE of incandescent and fluorescent lighting equipment, backed by almost 100 years of commercial and industrial lighting specialization. There is an answer to your problems in this unbiased lighting service.

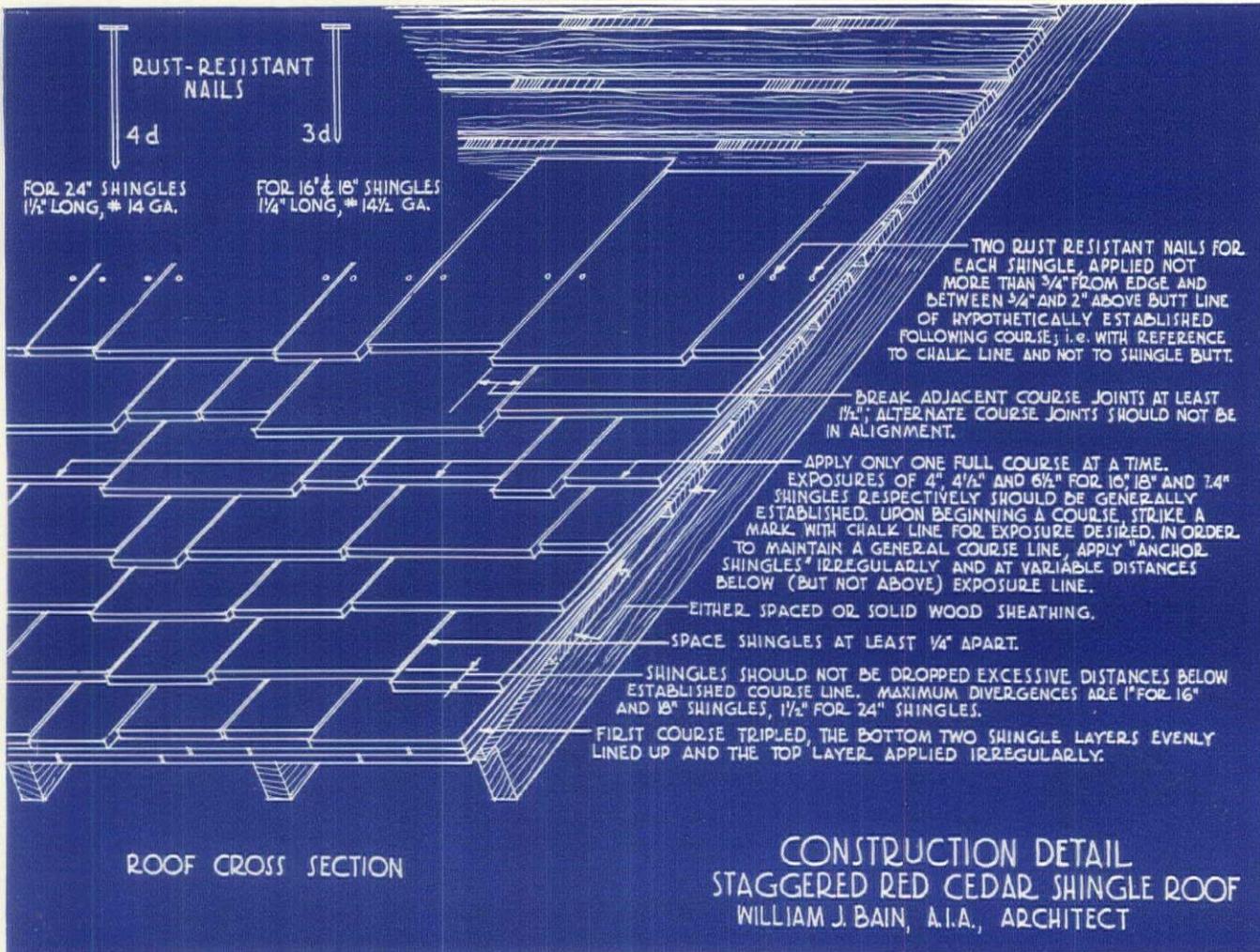


MILLER DEFENSE INSTALLATIONS

MILLER-IVANHOE "50 & 100 FOOT CANDLER" installations represent a "roll call" for defense. Here are a few of the many:

- Springfield Armory
- Frankford Arsenal
- Curtiss-Wright Corp.
- Grumman Aircraft
- Republic Aviation Corp.
- Fairchild Aviation
- Liberty Aircraft Products
- Uxbridge Worsted Co.
- Sperry Gyroscope Co.
- Ranger Engineering Corp.
- United American Bosch
- Murray Body Corp.
- Pratt and Whitney





THIS STAGGERED ROOF OF RED CEDAR SHINGLES ADDS BEAUTY TO ANY HOME

STAGGERING THE COURSES is not a complicated job; it costs very little more; it requires only about twenty percent more shingles, but it gives a thatched effect that is most pleasing. And of course the insulation value of the roof is greater than conventional application. But Beauty is the factor that is causing the growing demand for this type of roof.

With Red Cedar Shingles, the architect can produce a variety of different roof styles by merely changing the method of application. No special type of shingles is necessary—only a simple change in application method will mean a roof of different appearance.

A number of Blueprints on different types of application have been prepared for your assistance, and they will be sent to you FREE together with a handsomely illustrated 96-page Handbook on Shingle Application. All you have to do is to fill in the coupon at the lower left hand corner, tear off and mail. You will receive a service FREE that will be of value to you. Do it today.

RED CEDAR SHINGLE BUREAU
SEATTLE, WASHINGTON, U.S.A. Canadian Office: VANCOUVER, B. C.

FREE

TEAR OFF COUPON

Mail it Today!

RED CEDAR SHINGLE BUREAU
5507 White Building, Seattle

Gentlemen: Without charge you may send me Blueprints detailing methods of applying Red Cedar Shingles. Also 96-page Certigrade Handbook.

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CERTIGRADE
Red Cedar Shingles

SOLD EVERYWHERE

BY LUMBER DEALERS



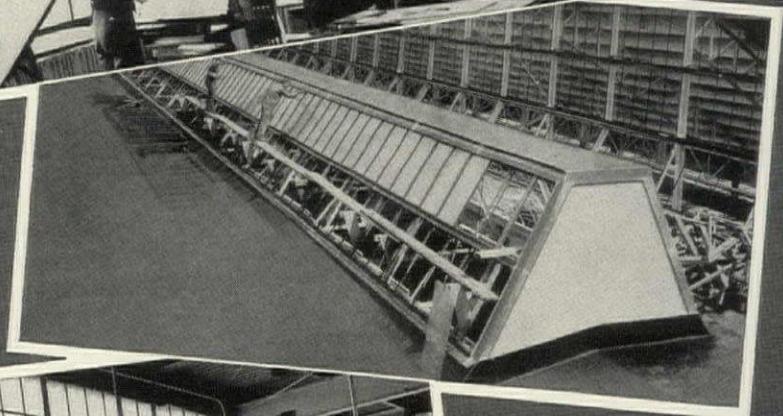
(Above) Staggering Shingles is easy.
(Below) Extreme type of staggered roof.

THE 3 BIG DEFENSE BATTLES...*

1.
THE BATTLE OF
Planning
and *Designing!*



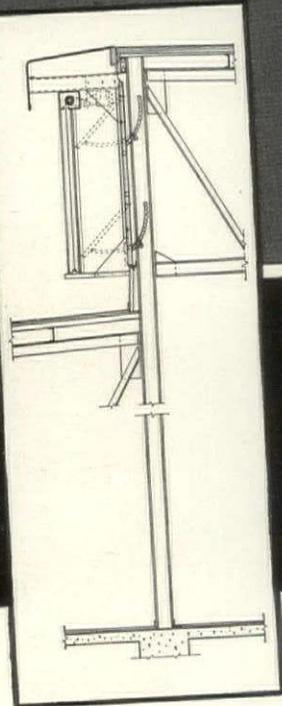
2.
THE BATTLE OF
Construction!



3.
THE BATTLE OF
Production!



HELP WIN THEM WITH Fenestra's STEEL WINDOW SYSTEMS



To win the first of these big battles, Fenestra's Engineering Research helps the architect and engineer develop better and more economical planning and controlling of natural lighting and ventilating.

In winning the Battle of Construction, great walls of Fenestra's Prefabricated Steel Windows are erected much more quickly than other types of walls. Time is saved, so is labor, as well as materials and MONEY.

In modern plants when Fenestra's Steel Window Systems have provided correct daylighting and efficient ventilation... The Battle of Production is being successfully waged with greater operating efficiency, lower costs, minimum spoilage and freedom from accidents.

*Suggested by a recent article by WILLIAM LESCAZE, Architect, in the Architectural Forum magazine.

"BLACKOUT" FOR DEFENSE

This drawing (much reduced) is one of several from "Industrial Defense Buildings," a bulletin issued recently by Fenestra's Engineering Research division. Bulletin shows a number of ways of blacking out Defense Plants of standard construction and Fenestra Steel Window Systems. It is designed to help Defense Industries to provide economically for efficient production NOT DURING an emergency and AFTER the emergency has passed. The coupon will bring a free copy.

Detroit Steel Products Company, Dept. AF-10,
2252 East Grand Blvd., Detroit, Mich.

Please send me the latest Fenestra publications, as checked:

- Industrial Airation
- Industrial Steel Windows
- Residence Steel Casements
- Windows
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- Industrial Defense Buildings Bulletin.
- Industrial Daylighting
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PREFABRICATED WINDOWS • DOORS • ROOF DECK

SILVER-GRAY ALBERENE STONE

is
ideal
for
exterior
use...



Hospital for Chronic Diseases, New York; Butler & Kohn-York & Sawyer, Architects; Alberene Stone used for spandrels, and for sill sills in all window openings.



John Shillito Building, Cincinnati, O.; Potter, Tyler & Martin, Architects; spandrels of Alberene Stone.



Sand-blasted Alberene Stone Spandrels; Buffalo Memorial Auditorium, Buffalo, N. Y.; Green & James, Architects.

and is readily obtainable!

Architects and designers find Alberene Stone a happy selection when a silver-gray or light blue-gray material with diversified and distinctive textures is needed for spandrels, sills, or trim. In addition to its decorative value, Alberene Stone is economical, and has great density and toughness. It can be cut into sections as thin as $\frac{7}{8}$ ", whereas the nature of other commonly used stones makes it difficult to use them in light thicknesses.

The supply of Alberene Stone in our Virginia Quarries is practically inexhaustible. Our mill facilities have been increased, so that the emergency finds us ready and able to give you exactly what you want . . . promptly. Stone is available in a color range of gray, dark gray, blue, blue-black, dark green and black. Inquiries will receive immediate attention.

ALBERENE STONE CORPORATION OF VIRGINIA

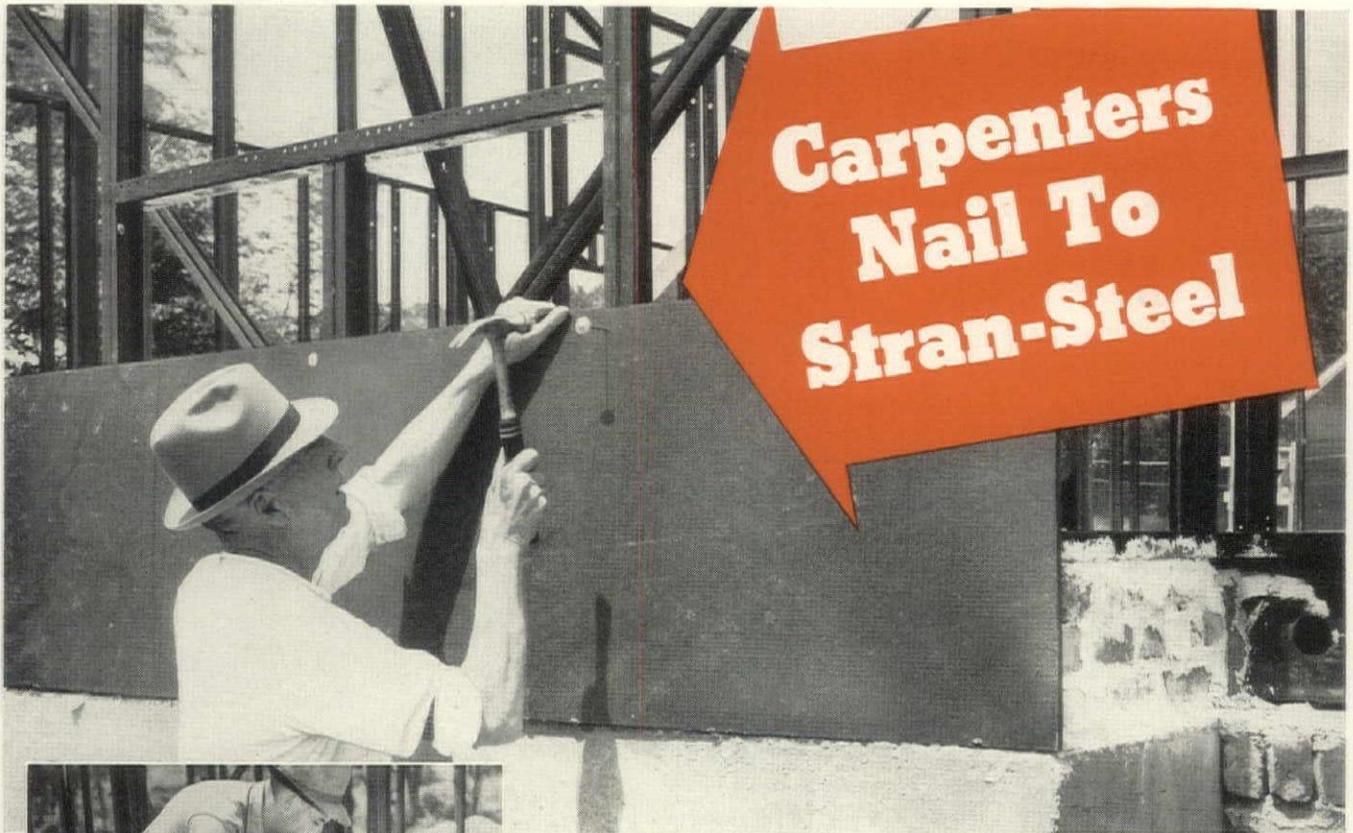
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⊠ THE NATURAL STONE OF DIVERSIFIED UTILITY ⊠



**Carpenters
Nail To
Stran-Steel**



Studs are secured to bottom plate with self-threading screws. Notice that studs (and floor joists) are placed 24 inches o.c. This wide spacing is possible due to the great strength of Stran-Steel—results in savings of material.



Nailing corrugated sheets to Stran-Steel floor joists. This forms a working deck during the early stages of construction. Later, concrete will be poured over the metal sheets, forming a safe, silent, fireproof floor.

The patented Stran-Steel nailing groove—an exclusive feature—means faster construction. Carpenters apply collateral materials in exactly the same way as in ordinary wood construction. Nails are driven into the grooves of the steel studs and joists—held in a steel grip more firm than is possible with wood construction. A regular claw hammer extracts the nails without difficulty, when necessary.

Although the nailing groove is an outstanding feature of this modern framing material, it is only *one* of Stran-Steel's many advantages. Stran-Steel may be assembled with self-threading screws (requiring only an ordinary screw-driver), or it may be welded into complete sections. On big projects, where many duplicate wall panels and roof trusses are needed, this latter method saves time and money. In addition to these erection advantages of Stran-Steel which combine to speed up the job, Stran-Steel has all the advantages—fire-safety, permanence and low maintenance cost—of steel construction.

GET ALL THE FACTS ON STRAN-STEEL NOW!

Write for the new Stran-Steel building manual, "On The Job," today. It clearly shows the methods used in Stran-Steel construction, and contains technical data on the various standard members. Your copy will be sent free, and entails no obligation on your part. Address your request to Stran-Steel Division, Great Lakes Steel Corporation, 607 Shelby Street, Detroit, Michigan.



**STRAN
STEEL**

UNIT OF NATIONAL STEEL CORPORATION

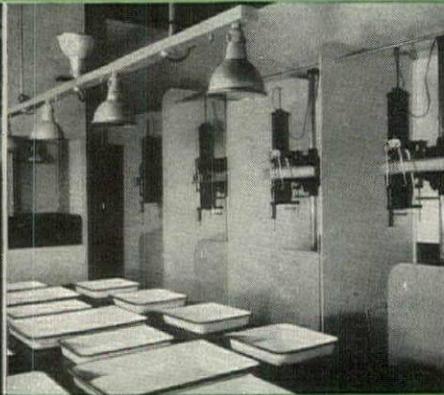
**YOU BUILD MORE DURABLE,
MORE BEAUTIFUL SCHOOLS**
*when you use Douglas
Fir Plywood in them*



● A & M Consolidated School, College Station, Texas. All interior walls and partitions are sturdy, puncture-proof Douglas Fir Plywood. C. J. Finney, Ernest Langford, architects. Smith Building Co., general contractor.



● The walls of this high school gym in El Monte, Calif., will take punishment galore because they're Plypanel-grade Douglas Fir Plywood. Marsh, Smith & Powell, architects. Plywood often forms temporary gym floors.



● The trim walls and booths in the photographic laboratory of the Art Center School, Los Angeles, are built of Douglas Fir Plywood. Where there is considerable moisture, the Exterior type should be specified.



● The smooth, flawless walls of architectural concrete formed against Plyform add greatly to the beauty of this elementary school in Tupelo, Miss. Designed by Overstreet & Town; built by W.P.A.

**There is a proper type
or grade for:**

- INTERIOR WALLS, CEILINGS**
- CASES AND BUILT-INS**
- CONCRETE FORMS**
- EXTERIOR FINISH**
- SHEATHING, SUB-FLOORING**

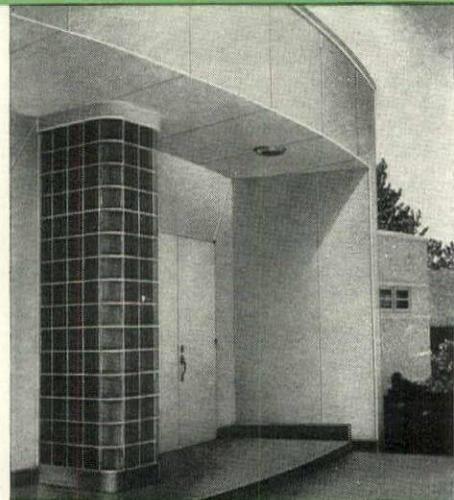
● Douglas Fir Plywood is being used in increasing amounts in modern school construction because its versatility intrigues the designer . . . because its low-cost performance and durability please the taxpayer. The Plypanel and Plywall grades build interior walls and partitions that are kick-proof and sound absorbent. They provide excellent insulation . . . are receptive to more finishes than any other wall material. The concrete form grade, Plyform, produces smooth, finless concrete surfaces that require a minimum of

finishing. Plyform serves as sheathing and lining combined . . . gives numerous re-uses when handled with reasonable care.

The Exterior type opens a new field of design possibilities. Because this type of Douglas Fir Plywood can be boiled without delaminating, because it comes in large panel sizes and because of its easy workability, it is being specified extensively for exterior finish in every climate.

The Plyscord grade is unsurpassed for wall and roof sheathing, sub-flooring, one-use concrete forms and other utility jobs. The big panels reduce labor costs . . . add greatly to the rigidity of walls, making them more resistant to earthquakes and high winds.

If you aren't acquainted with all the advantages of Douglas Fir Plywood in school construction, consult Sweet's Catalog or write for free literature and test data. Douglas Fir Plywood Association, Tacoma, Wn.



● The smart, streamlined exterior of the Penthouse Theatre at the University of Washington, Seattle, is water and weather-proof Exterior-type Douglas Fir Plywood. Note the pleasing curved surface formed by panels.

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



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



MILLIONS OF NEW HOME BUYERS WILL SEE THIS ADVERTISEMENT

It's the first in a brilliant new series that will sell GAS and modern Gas Appliances to America's home-buying public . . . to *your* clients! Build GAS into your homes and take advantage of today's *most widely accepted modern fuel!*

The Wife's side . . .

"I'M THE ONE that's going to use this range—so it's got to be fast! I'm too busy to wait around for the kettle to boil—or the oven to warm up—Yes! I want the instant high heat and the cleanness of Gas—the flexibility of Gas that gives me any degree of heat I need. I want all the wonderful new

time-saving and work-saving features I'd get on a modern Gas range—signal simmer burners . . . oven heat control . . . a 'smokeless' broiler . . . lots of storage space . . . automatic lighting . . . Oh! and dozens more! Golly! but I'd be a better cook, too—if I had a marvelous new Gas range!"



The Husband's side . . .

"I'M THE ONE that's going to pay the bills for food and fuel—so the economy and efficiency of Gas make sense to me! I want a range that will last for years and won't need costly replacements— that means a Gas range too! And I want one that's as good looking

and up-to-the-minute in its way as my new car— One we'll be proud to show our friends— like the beauty I saw in a store window just this morning! Yes! guess it would be smart to take Mary downtown and have her pick one out tomorrow!"



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LIFE
GOOD HOUSEKEEPING
LADIES' HOME JOURNAL
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BETTER HOMES &
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GAS — 
THE WONDER FUEL FOR COOKING

Show your husband (or wife!) the new Gas ranges at your Gas Appliance Dealer's or Gas Company. The many exclusive advantages of modern Gas service have been made possible by the Gas utilities of America which, through their laboratories and other agencies, are constantly improving their service to you.
AMERICAN GAS ASSOCIATION



THIS SEAL certifies that the Gas range carrying it meets all the 22 super-performance standards established by the Gas industry. It stands for the "certified performance" of the range you buy—regardless of the make you buy—Today 24 of America's leading range manufacturers offer CP (certified performance) models. Look for the CP seal when you buy.

LET GAS DO THE BIG JOBS — COOKING • WATER HEATING • REFRIGERATION • HOUSE HEATING

AMERICAN GAS ASSOCIATION

Will that new
roof deck you
select require
"Nursing"
all its life?

Make it a



Featherweight PRECAST CONCRETE ROOF DECK



Simple as A.B.C.

(A) Slabs are simply laid on the roof purlins—
(B) the joints are cemented—and (C) the composition covering is applied immediately thereafter.

... Install it and forget it!

Once in place, this modern, fireproof roof deck requires no further care or attention during its entire long life. *Featherweight* Precast Concrete Slabs are permanent—cannot rot, rust or disintegrate—never need painting, repairs or replacements. They actually grow stronger with age. You can install the roof deck—and forget it. In addition, and vitally important under present day conditions, these slabs are speedily laid in any weather—enable your client to get under cover and into production at once. Catalog and Details on request.

Made, Laid and Guaranteed by

FEDERAL-AMERICAN CEMENT TILE CO.

608 South Dearborn Street
For Over Thirty Years

Chicago, Illinois
Sales Offices In Principal Cities

Plants near: CHICAGO—NEW YORK—PITTSBURGH—BIRMINGHAM

This ARMCO advertisement appeared in the September issue of *Better Homes and Gardens*.

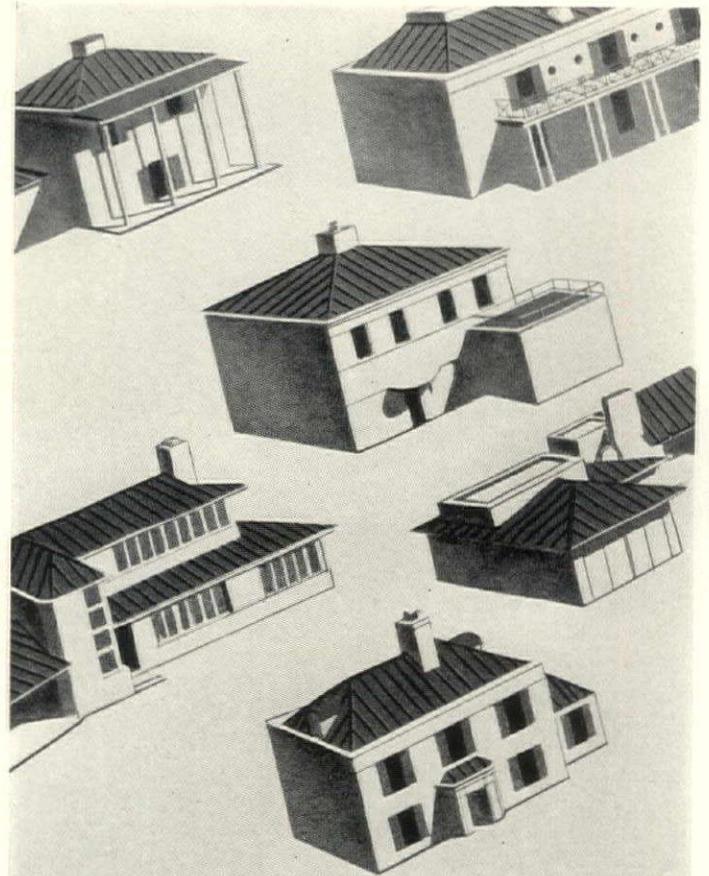
Another example of ARMCO assistance to architects

A RCHITECTS make it their business to know building materials — from the ground up!" says this advertisement in the September issue of *Better Homes and Gardens*. Again ARMCO reaffirms the important position of the architect in the building world. For 27 years in national magazines and 10 years in radio advertising, ARMCO has helped interpret the architectural profession to the public.

As you know, *Better Homes and Gardens* is the monthly magazine that goes into more than two million homes. It is read by thousands of people interested in building or remodeling their homes. Many of these people are reminded by ARMCO's advertising to seek the guidance of an architect.

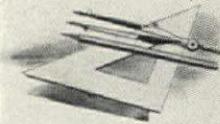
Architects can recommend ARMCO Ingot Iron with confidence. This durable metal has the longest service record of all low-cost iron or steel sheets. Installations going back to 1909 are in good condition today. These include roofs, roof drainage systems, siding, airducts, and other residential and industrial sheet-metal work.

There are some interesting facts on ARMCO Ingot Iron that you may want for your files. Write to The American Rolling Mill Company, 2691 Curtis Street, Middletown, Ohio.



SPECIFIED BY ARCHITECTS

**more than all other
galvanized sheets***



Architects make it their business to know building materials — from the ground up!

*So it is particularly impressive that small-house issues of *The Architectural Forum* have carried more architects' specifications of galvanized ARMCO Ingot Iron than *all* other iron or steel sheets combined.

You want the roofing, gutters and downspouts on your home to give lasting service. This also applies to the sheet-metal airducts inside your walls, which heat the house in winter and bring air-conditioned comfort in summer. Early rust-failure of these vital sheet-metal systems means high repair costs and plenty of headaches.

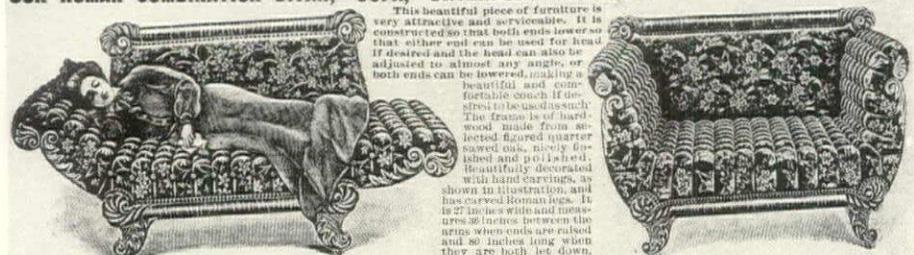
Architects know from experience that ARMCO Ingot Iron endures. It has the longest record of actual service of *any* low-cost iron or steel sheets, which means economy to you in extra years of trouble-free protection.

You have made a good investment when your architect uses galvanized ARMCO Ingot Iron — regular or with the special PAINTGRIP finish for immediate painting and long paint life. The American Rolling Mill Company, 2251 Curtis St., Middletown, Ohio.



FORUM OF EVENTS

OUR ROMAN COMBINATION DIVAN, SOFA, DAVENPORT OR COUCH WILL ANSWER FOR ALL.



This beautiful piece of furniture is very attractive and serviceable. It is constructed so that both ends lower so that either end can be used for head. If desired and the head can also be adjusted to almost any angle, or both ends can be lowered, making a beautiful and comfortable couch if desired to be used as such. The frame is of hardwood, made from selected figured quarter sawed oak, nicely finished and polished. Beautifully decorated with hand carvings, as shown in illustration, and has carved Roman legs. It is 27 inches wide and measures 36 inches between the arms when ends are raised and 80 inches long when they are both let down. Made with small deep tufts.

put in with the celebrated Naper Steel Tufting Buttons which cannot pull out. It contains a full set of the best steel springs well supported spring edge and with a heavy duck canvas over the springs. Fitted with ball bearing casters. The attachments for adjusting the ends are very simple and are operated as follows: To place either end straight, raise the same to the highest point and a little beyond that and the head will drop down to level, it can then be raised to the different positions desired. There are no strings to pull as the attachment is automatic. There is no prettier or more serviceable piece of furniture in existence today. Shipping weight, 60 pounds.

No. 1V4243 Price, upholstered in velvet..... \$13.45
 No. 1V4244 Price, upholstered in Andover velvet..... 14.35
 No. 1V4247 Price, upholstered in novelty velvet..... \$14.75
 No. 1V4248 Price, upholstered in two-color velvet..... 16.95

PARTICIPATING STORES: L. S. Ayres & Co., Indianapolis; Barker Bros., Los Angeles; Bloomingdale's, New York; Famous-Barr Co., St. Louis; Marshall Field & Company, Chicago; Gimbel Bros., Philadelphia; Jordan Marsh Co., Boston; The Halle Bros. Co., Cleveland; The J. L. Hudson Co., Detroit; Kaufmann Department Stores, Pittsburgh; The F. & R. Lazarus & Co., Columbus; Wolf & Dessauer, Fort Wayne.

RETAIL PRICES:
 1. Benches, \$11.98 to \$14.98, depending on size. Storage units, \$32.75 each. Table, \$59.50. 2. Armchair, \$89.50. 3. Armchair, \$75. 4. Coffee table, \$49.50. 5. Chair, \$49.50. 6. Desk, \$32.98. Units, \$22.98 to \$39.98. Table, \$19.98. 7. Dressing table, mirror, \$139.50. Seat \$19.98.

PRIZEWINNING FURNITURE ON DISPLAY

On the 24th of last month the Museum of Modern Art opened its exhibition of "Organic Design in Home Furnishings," bringing to a logical conclusion the competition announced last year. The prizewinning designs (ARCH. FORUM, March, 1941, p. 20) were immediately put into production, and with the cooperation of twelve key department stores, headed by Bloomingdale's, a countrywide series of exhibits was scheduled. Coordinator of the entire program was Industrial Design Director Eliot Noyes, who also designed the handsome installation in which burly guards set up whole rooms as visitors request. Typical of the material illustrating the background of U. S. furniture design is the 1902 advertisement above. Most radical of the designs are the Saarinen-Eames chairs. Constructed of formed plywood and covered with foam rubber, they give the most convincing glimpse of the future, when such pieces may well be squeezed out on huge presses like Henry Ford's new plastic fenders.



1, DINING ROOM FURNITURE BY SAARINEN AND EAMES



2, ARMCHAIR BY SAARINEN AND EAMES



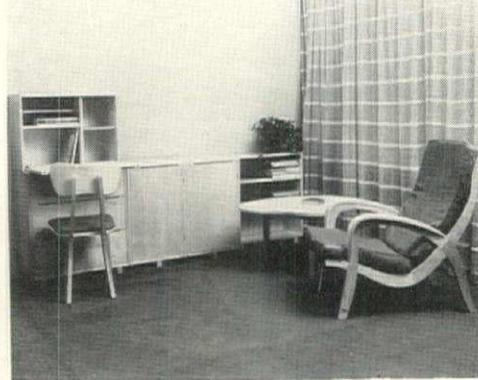
3, ARMCHAIR BY SAARINEN AND EAMES



4, COFFEE TABLE BY SAARINEN AND EAMES



5, CHAIR BY SAARINEN AND EAMES



6, LIVING ROOM GROUP BY CRAIG AND HATFIELD



7, DRESSING UNIT BY CRAIG AND HATFIELD

(Continued on page 36)



The 4 Design Essentials in LOW COST DEFENSE HOUSING

SIXTH of a series of advertisements on How to Design and Build Homes That Sell!



1 - LIVABILITY

Loads of sunshine! Floods of fresh air! Give defense workers and their families health protection. Ceco Casements have greater light areas . . . and an "all-out" ventilation principle!



2 - COMFORT

Ceco Casements have **double** weathering on all four sides. They are weather-tight in winter and provide controlled ventilation in summer - the maximum in comfort.



3 - SPACE ECONOMY

Smaller wall openings for compact homes, without sacrificing light! Ceco Casements, due to slender muntins and frames, allow as much as 1/3 MORE LIGHT AREA for the same wall opening.

4 - APPEARANCE

With a selection of muntin arrangements and ventilating units, Ceco Windows are bound to harmonize. Their neat, trim lines add beauty. BONDERIZING and baked-on enamel keeps them good-looking for many years, with minimum upkeep.



IDEAS FOR DEFENSE HOMES — FREE!

Defense homes can, and should be beautiful. Get your copy of this "BEAUTIFUL WINDOWS" brochure. It's full of unusual ideas for better window treatments.



● LIVABILITY — COMFORT — SPACE ECONOMY — APPEARANCE! These are the four essentials in America's defense housing program. See how Ceco Casements measure up to each of these design features . . . yet they cost no more than ordinary windows. And windows of BONDERIZED steel endure. They will help you make the defense homes of today the livable, practical homes of tomorrow!

CECO STEEL PRODUCTS CORPORATION
Manufacturing Division: 5701 W. 26th St., Chicago, Illinois

Ceco Steel Windows

METAL FRAME SCREENS

OTHER CECO PRODUCTS

METAL LATH & ACCESSORIES

COMMERCIAL, INDUSTRIAL & BASEMENT WINDOWS

STEEL JOISTS & ROOF DECK

MEYER STEELFORMS
ADJUSTABLE SHORES,
COLUMN CLAMPS
CONCRETE REINFORCING BARS
WELDED FABRIC
METAL WEATHERSTRIPS

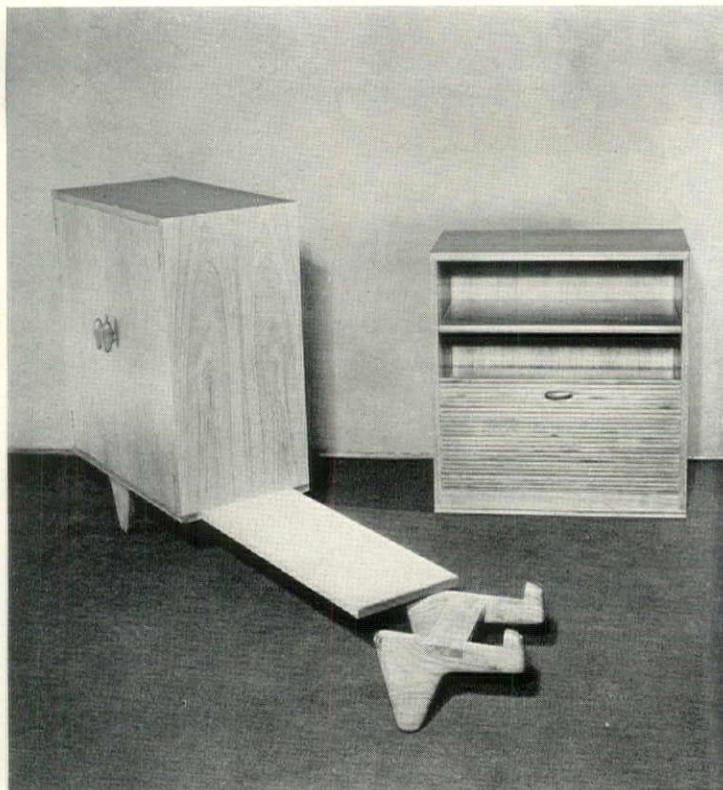
FORUM OF EVENTS

(Continued from page 34)

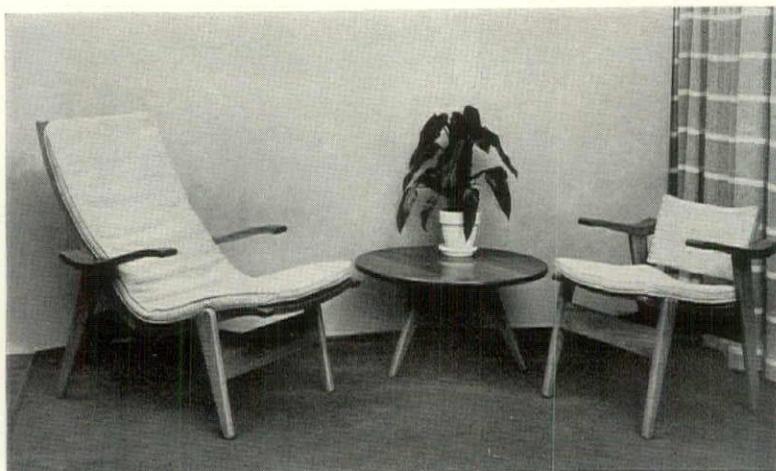
The unit-furniture idea appears again and again in the exhibition. The living and dining room furniture by Saarinen and Eames shown on the preceding page is an excellent example. The pieces by Stonorov and von Moltke show the idea carried even further, to include beds and couches as well. The bed consists of a stock frame, with spreaders to provide any standard width. The head and foot boards are removable, and the bed may be used without them. Storage units are open, equipped with trays or drawers, and furnished with doors or roll-down fronts. The woven fabrics are three of a series by Marli Ehrman, one of the prizewinners, and have been used to cover a number of the chairs on display.



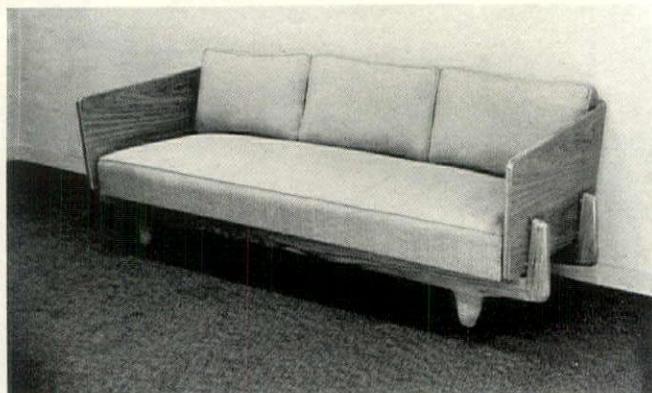
1. STONOROV AND VON MOLTKE



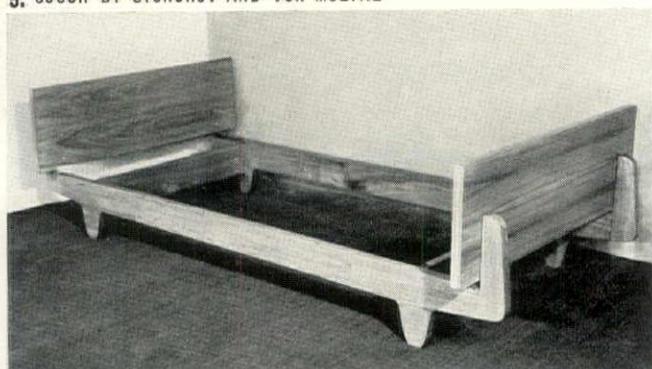
4. DEMOUNTABLE UNITS BY STONOROV AND VON MOLTKE



2. CHAIRS AND TABLES BY NICHOLSON AND MAIER



5. COUCH BY STONOROV AND VON MOLTKE



6. BED FRAME BY STONOROV AND VAN MOLTKE



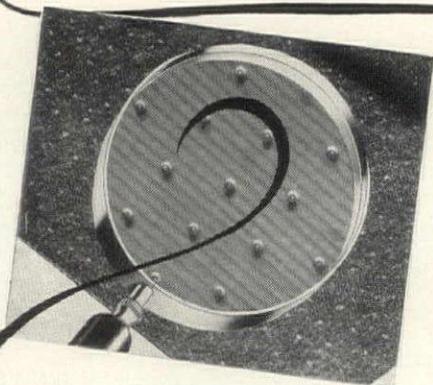
3. WOVEN FABRICS BY MARLI EHRMAN



7. BEDROOM UNITS BY STONOROV AND VON MOLTKE

1, Chair, \$99.50. Demountable base (see 4), \$14.98. Bookcase, \$29.98. Tambour unit, \$39.98. Door unit, \$32.98. 2, Made for exhibition only. 4, See 1. 5, Couch, \$139.90. 6, Bed frame, \$34.50. 7, Door unit, \$39.98. Tambour unit (with trays) \$59.98. Drawer unit, \$44.50. Base, \$14.98.

**ROOFING FELT?
LOOKS MORE
LIKE A SIEVE
TO ME!**

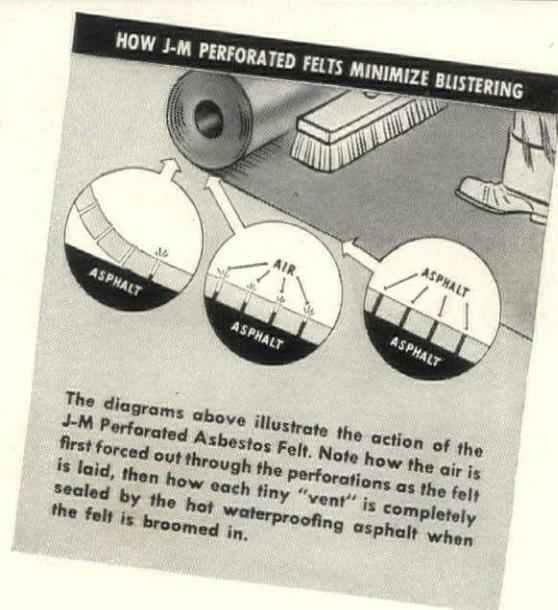


But these millions of tiny holes in the new J-M Perforated Asbestos Felt actually mean a better Built-up Roof... Read why:

IMAGINE making a better built-up roof by punching holes in the felts! Yet that's exactly what has been done in the J-M Perforated Asbestos Felt! And the "safety-valve" action these holes provide is sound and easy to understand. It works like this: The minute perforations permit trapped air to escape as the felts are laid, thus reducing objectionable blisters to a minimum. But once the felts are in place, the tiny holes are completely sealed by the waterproofing asphalt!

More flexible and easier to handle, J-M Perforated Felts are quickly broomed into place... adhere snugly to the roof deck and to each other. No wonder you get a better built-up roof!

J-M Smooth-Surfaced Asbestos Roof, built with the new Perforated Felt is rotproof, fire-resistant... need no protective coating to withstand the sun's drying-out action.



Send for the free 48-page book, "Things You Should Know About Your Roof." Johns-Manville, 22 E. 40th St., New York, N. Y.



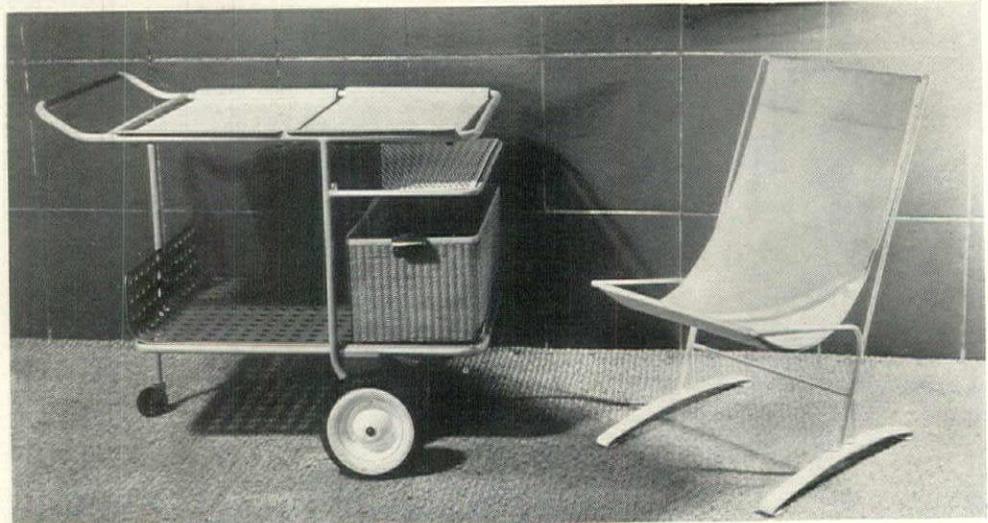
JOHNS-MANVILLE
Smooth-Surfaced
ASBESTOS BUILT-UP ROOFS

**THE ROOF
WITH THE SAFETY
FACTOR**

FORUM OF EVENTS

(Continued from page 36)

Among the most stimulating of the designs on display are the outdoor pieces, notably the rubber-tired tea wagon at the right. A thoroughly practical gadget, it makes outstanding use of the textures of perforated metal and wicker. The two rattan chairs are covered with fabrics by Antonin Raymond, also prizewinners in the competition. One of the most satisfactory lamp designs appears at the bottom of the page: the two reflectors make possible a wide variety of lighting arrangements. An amusing variation is the chair in 3. Metal plugs fastened to the corners of the cloth seat and back slip into the open ends of the pipe frame.



1, TEA WAGON AND CHAIR BY WEESE AND BALDWIN



4, CHAISE LOUNGE AND TRAY BY ANDERSON AND BELLAH



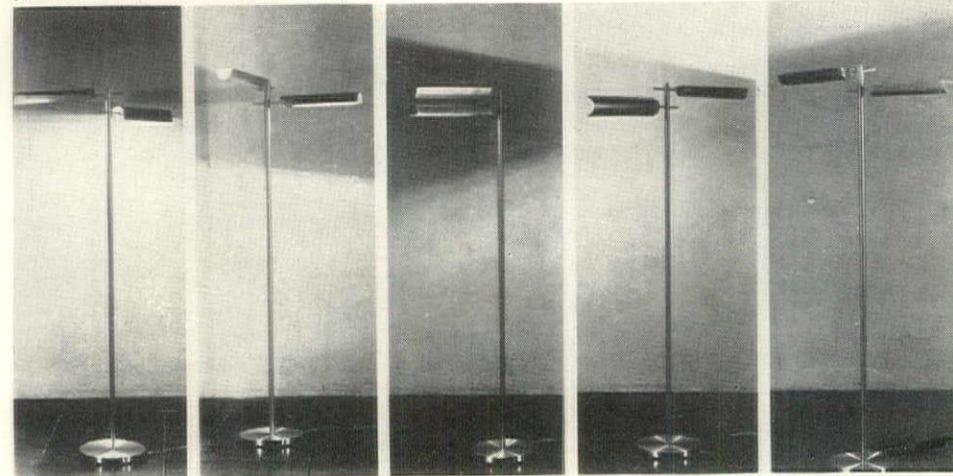
2, BENCH, TABLE AND BARBECUE WAGON BY WEESE AND BALDWIN



3, PORCH FURNITURE BY ANDERSON AND BELLAH

1, Tea wagon, \$49.50. 2, Bench, \$16.98. Table, \$32.50. Wagon, \$23.50. 3, Cot, \$32.50. Sailcloth chair, \$14.98. Metal chair, \$12.98. 4, Chaise, \$85.00. Tray, \$29.50. 5, Lamp, \$24.98. 6, Chair, \$25.50. Table, \$19.50.

5, FLOOR LAMP BY PETER PFISTERER



6, CHAIR AND TABLE BY ANDERSON AND BELLAH

(Continued on page 102)



(Photos: Gabriel Moulin)

**THE GLASS
THAT BENDS**

**THIRTY
COLORS**

Peach Mirror Flexglass treatment, foyer, Eddie Dunne Cocktail Bar, San Francisco, California, Williams & Grimes, Architects.

Permits full creative expression in glass

To make San Francisco's newest Cocktail Bar truly outstanding, Williams & Grimes, Architects, treated the multiple-curved entry-way walls with exotic Peach Mirror Flexglass. Here is beauty that attracts . . . vivacity that appeals . . . because of the color, sparkle and freshness of Flexglass. Installation is simple and speedy with this *real* glass in 30 colors and patterns, and it can be used *outdoors* as well as indoors. Flexglass is new and exciting. It has limitless decorative possibilities for columns, ceilings, panels, fronts and fixtures. Please write for color card; distributors in principal cities.



View toward street, showing convex, concave and flat applications of Flexglass.

UNITED STATES PLYWOOD CORPORATION, 103 PARK AVENUE, NEW YORK—Manufacturers of Flexwood

Flexwood and Flexglass are manufactured and marketed jointly by The Mengel Co., Louisville, Ky., and the United States Plywood Corp., New York

Leading Architects Choose Janitrol for Winter Comfort and Good Health



LACKAWANNA DEFENSE HOUSING PROJECT
LACKAWANNA N.Y. - PROJECT 30033

FEDERAL WORKS AGENCY
JOHN M. GARMODY - ADMINISTRATOR
UNITED STATES HOUSING AUTHORITY
NATHAN STRAUS - ADMINISTRATOR
IN COOPERATION WITH
HOUSING AUTHORITY OF THE CITY OF LACKAWANNA
HARRY F. HUDSON - ARCHITECT
JOSEPH E. FRONCZAK - ROSWELLE PFOHL - ASSOCIATES



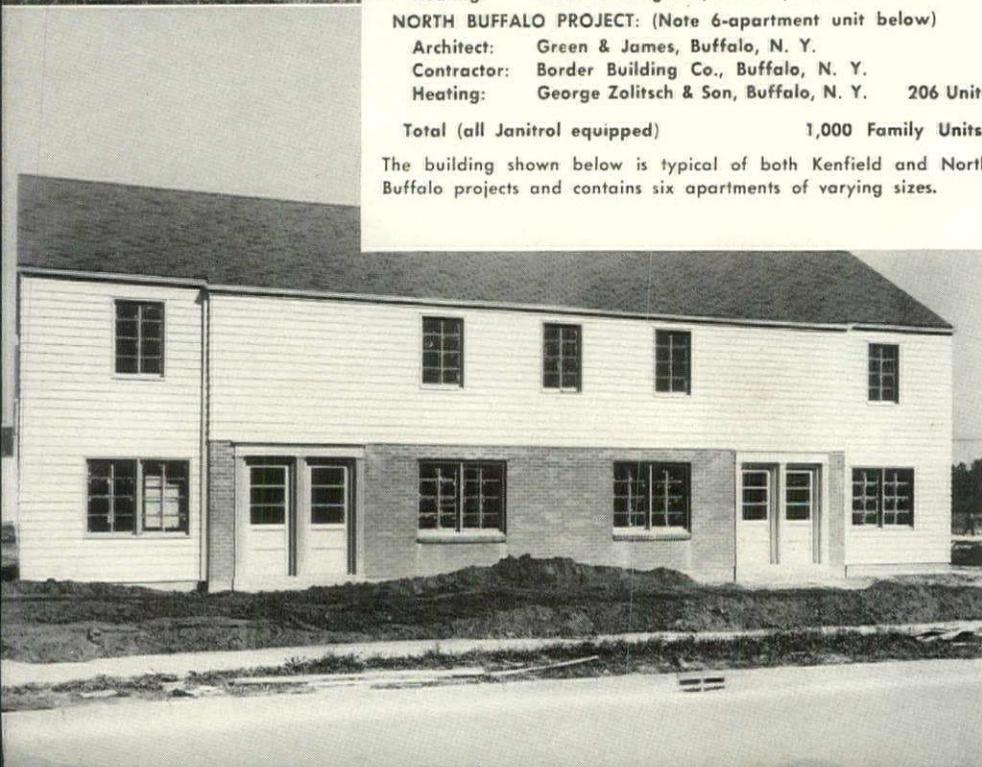
LACKAWANNA HOUSING PROJECT: (Shown top of page)
Architect: Hudson & Hudson, Buffalo, N. Y.
Contractor: Delval Construction Co., Scarsdale, N. Y.
Heating: Coon & Fuchs, Buffalo, N. Y. 200 Units

KENFIELD HOUSING PROJECT: (Construction shown at left)
Architect: Green & James, Buffalo, N. Y.
Contractor: W. L. Crow Construction Co., New York, N. Y.
Heating: Ideal Heating Co., Buffalo, N. Y. 594 Units

NORTH BUFFALO PROJECT: (Note 6-apartment unit below)
Architect: Green & James, Buffalo, N. Y.
Contractor: Border Building Co., Buffalo, N. Y.
Heating: George Zolitsch & Son, Buffalo, N. Y. 206 Units

Total (all Janitrol equipped) 1,000 Family Units

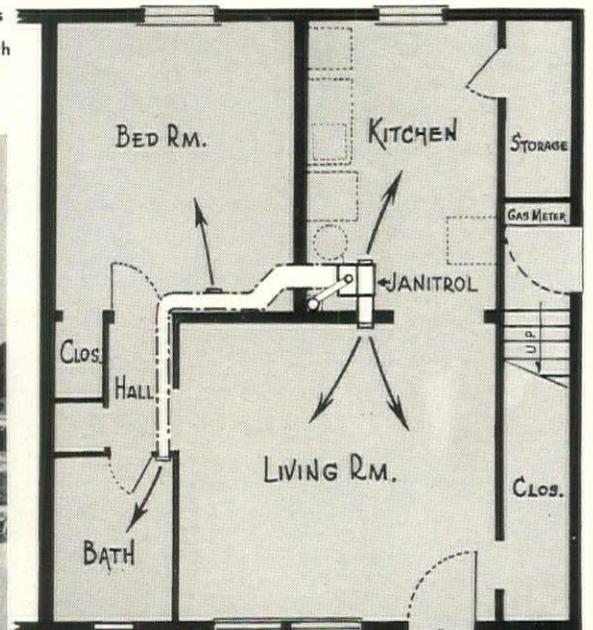
The building shown below is typical of both Kenfield and North Buffalo projects and contains six apartments of varying sizes.



Not Just Heaters But

Automatic Duct-Conveyed Heat

Note from diagram how ducts convey proportional heat to various rooms, as shown by arrows. This is true of all the Janitrol systems in all of the 1,000 units of these three Buffalo projects. Air is forced to far corners and returns to grill in the compact, space saving Janitrol heater located in the kitchen.



Automatic Gas-Fired Heating Systems in a Thousand Buffalo Defense Homes

Defense Homes? Yes, and Others Too — Our Pledge to the Building Trades

Soon one thousand defense workers employed by Curtiss-Wright, Bell Aircraft, Bethlehem Steel and others in Buffalo will be able to house their families in these fine apartments.

Here will live a thousand families without any ashes to carry, no fuel to shovel or store, nor a minute's furnace tending in the whole 1,000 homes. Certainly winter colds will be reduced to a minimum by the automatic, uniform Janitrol heat. Thus the health of the defense worker is protected and his time and strength conserved for important defense work.

For Individual Homes and Stores in Buffalo — and Elsewhere

The satisfaction we get out of giving one thousand defense families the world's finest automatic heat is tempered somewhat by difficulty in supplying individual builders all the Janitrols they need. In Buffalo and many other cities, builders depend upon Janitrol for heating homes, stores and factories.

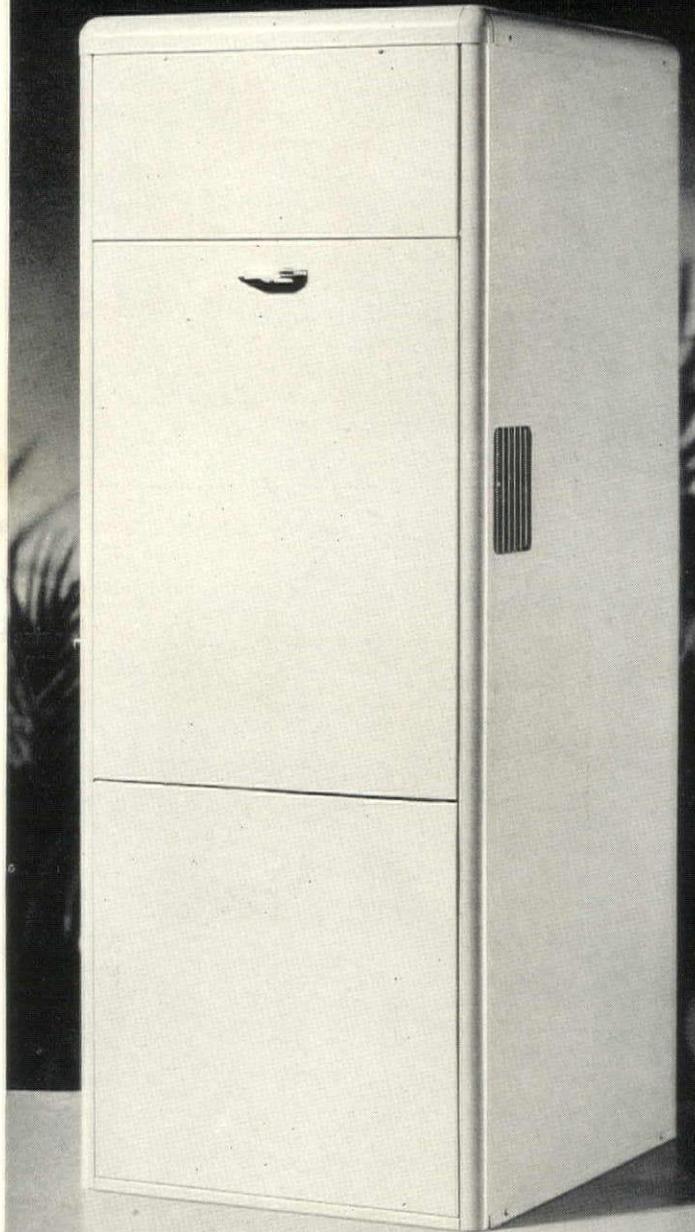
We're doing all we can — working full capacity 24 hours a day to see that every builder who depends upon us gets his Janitrol equipment just as fast as we can give it to him.

Defense work does, of course, throw schedules out of gear, but is not going to keep us from fighting every inch of the way to supply our friends the builders with gas-fired air conditioners and unit heaters. Somehow we have an optimistic feeling that the situation will clear and supplies will flow and that we may properly serve our dealer and builder friends from whom, in normal times, our business must come.

We suggest that you plan your building program with a longer range viewpoint than in normal times and make it plain to your customers that delivery dates cannot be as immediate nor as certain as they would be if there were no defense needs, no priorities, nor the abnormal demand upon manufacturers which exists. Since the best products will be most difficult to get, forward planning is essential.

SURFACE COMBUSTION CORPORATION, TOLEDO, OHIO
Offices and Engineers in Principal Cities

Janitrol Forced Air-Conditioner, an automatic gas-fired heating unit much used for heating individual apartments in group housing projects, also for individual homes.



JANITROL

SC

WINTER AIR CONDITIONERS • CONVERSION BURNERS • UNIT HEATERS • GRAVITY FURNACES

For us the living...better homes



"Americans want 'living', not 'housing'. We want homes with telephones, radios, automatic heat, mechanical refrigeration, air conditioning. In short, Americans want more copper in their homes, for more copper means better living. That is why industrial research and the new developments in copper now taking place in Revere's laboratories can bring us far greater comfort and pleasure in days to come.

"So, no matter what else results from the all-out effort our country is making, one thing seems certain. When it is over, real enjoyment of life in our homes can be greater, can be available to millions more. For in this great emergency, new standards are being created. Industry is experimenting with new processes. Revere is working out new things in copper. Architects are inventing new methods of building.

"Here is one conception by the famous designer, Norman Bel Geddes. It shows the deep comfort, the complete convenience, the dignity of living which American production methods could easily provide."

Donald Dallas
President



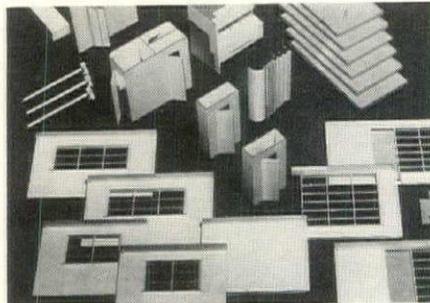
NORMAN BEL GEDDES says—"Through our inventive and productive genius, we Americans enjoy more comfort, more freedom, more fun than any other people on earth because these things are built into our homes. That's the secret of our famous standard of living. But we are still back in the dark ages in the way we construct a house. If we got as much house for our money as we do in a modern radio or automobile, even the lowest income could buy living fit for a king.

"The way to do it is to build our homes as we build the other good things of life—not just a few at a time, but by the thousands, using our mass production methods.

"Here is a home I have designed which, if built on such a scale, would cost you less than \$2000. It is a home with much more copper in it, because it is full of the new conveniences which copper alone can bring.

"When you once realize how spacious and attractive such a home can be, how luxuriously livable, how free from repairs—and how much individuality in shape and design it offers—I think you and all America will want homes built this way.

"Imagine a house with only 27 basic parts, which can be delivered at your building site in the morning and assembled into a finished home ready for you to move into by dinner time! Here you see the 27 units as they would come off the production line. But we who are planning these homes know that Americans do not want standardized designs. So the basic parts of this house are made so that they can be assembled in various ways to form no less than 11 distinct homes—all different.



"The kitchen, complete with modern range, sink, mechanical refrigerator and steel cabinets, looks just like those you see in the magazines. But what you don't see is that this kitchen is formed in one piece by machine, without costly hand work. On its opposite side is a modern bath, built the same way. And its interior encloses the hot water and heating systems.

"Here is a place for a healthy, happy family to grow up—in spacious rooms flooded with light from large windows. Fresh air is brought in from outdoors, washed, heated in winter, and circulated all year 'round. These are only



a few of the many features in this home which modern production methods can bring within your reach."

NORMAN BEL GEDDES

Largely through copper, the modern house has 200% more living in it than that of a generation ago. For the more copper you get per building dollar, the better the home to own or sell. In this way Revere adds value to houses from roof to cellar. Heating units with Revere Copper cut down service costs. Plumbing of Revere Copper saves on installation and upkeep. Revere Copper guards against wind, damp, cold, insects.

Today, the copper industry is working for Uncle Sam, and copper is restricted for general use. But meanwhile, in Revere's laboratories, research is constantly developing new copper alloys, new uses for copper, new forms for copper. We are working today to be ready for your housing needs tomorrow.

Naturally, it is impossible for Mr. Geddes to give full details about his house in this space. We have prepared an illustrated folder describing it fully. We will be glad to send it to you on request. Just write to:



REVERE

COPPER AND BRASS INCORPORATED
Executive Offices: 230 Park Avenue, New York

"To help prepare the way..."



"When the productive energies of the nation are released following the emergency, one factor can be all-important in bringing into fruition the combined contribution of architects, designers, engineers, builders, financiers, toward better housing.

"That is, interest and actual demand by the public itself.

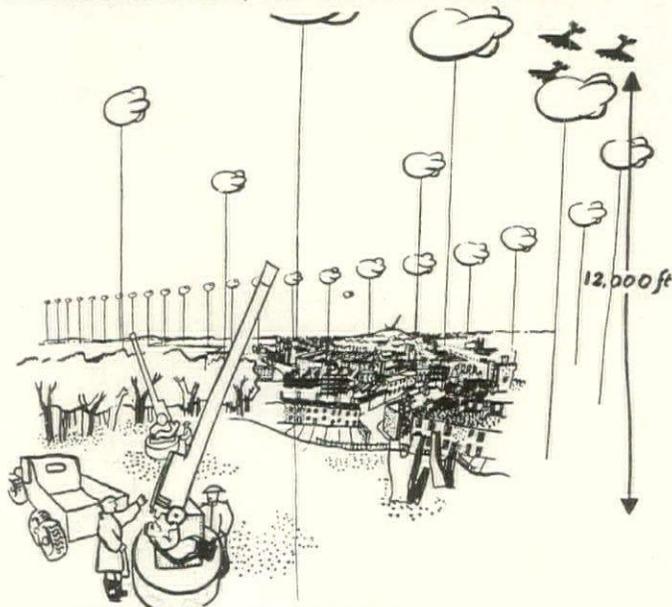
"Belief in this view, and in the contribution copper and brass may be destined to make have prompted REVERE COPPER AND BRASS INCORPORATED to commission imaginative designers to anticipate the solutions of various Building problems. It is hoped that publication of these projects, such as the Geddes house, in magazines reaching millions of Americans will help prepare the way for tomorrow's techniques."

Donald Dallas
President

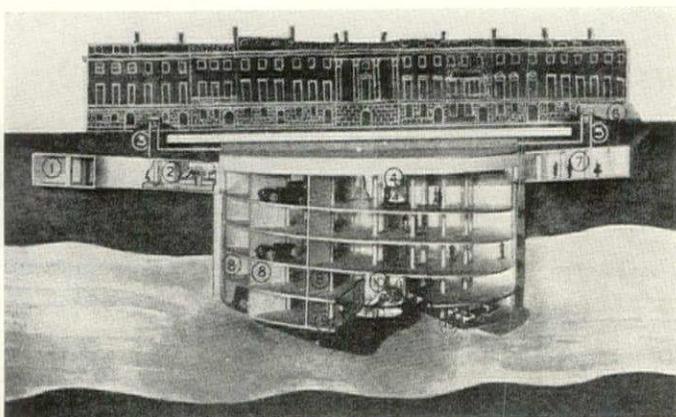
BOOKS



WALKING-STICK INSECTS, from "THE ART OF CAMOUFLAGE"



BALLOON BARRAGE, from "PLANNED A.R.P."



RAMP SHELTER, from "PLANNED A.R.P."

THE ART OF CAMOUFLAGE, by Lt.-Col. C. H. R. Chesney, with four chapters written by J. Huddleston. Robert Hale, Ltd., London. 252 pp., illustrated. 5½ x 8. 8s. 6d.

PLANNED A.R.P., by Tecton. Chemical Publishing Co., Inc., Brooklyn, N. Y. 138 pp., illustrated. 5¾ x 8¾. \$3.50.

AIR RAID DEFENSE (Civilian), by Curt Wachtel. Chemical Publishing Co., Inc., Brooklyn, N. Y. 240 pp., illustrated. 5¾ x 8¾. \$3.50.

CIVIL AIR DEFENSE, by Lt.-Col. A. M. Prentiss. Whittlesey House, New York. 334 pp., illustrated. 6½ x 9. \$2.75.

AIR RAID PRECAUTIONS, Chemical Publishing Co., Inc., Brooklyn, N. Y. 6 x 8¾. \$3.00.

The output of books on war and its effect on civilians has gone up sharply in the past few months, as the five titles above indicate. As might be expected, a majority of these books were prepared in England, where the immediacy of problems of passive defense during the past two years has stimulated a tremendous amount of research and writing, much of which has already been tested by actual experience. Any critical evaluation of these books would, of course, have to come from an authority in the field. It is apparent, however, from the subjects covered and from a comparison of opinions offered by the various writers that there now exist wide areas of agreement on the essentials of theory and practice. For the U. S. architect, therefore, these books provide an indispensable basis for any work of civil defense he may be called upon to do, and they could eliminate a major cause of expensive mistakes: the lack of adequate technical data based on experience.

Unlike the other books listed, "The Art of Camouflage" deals with a subject as important in military operations as civilian defense. The object of camouflage behind the area of fighting is not so much to protect the populations of cities from explosives, incendiaries and gases as to conceal industrial objectives and other points of military importance. It involves a study of protective coloration and forms in nature, dramatically illustrated by the picture of the walking-stick insects. It further involves concealment, for instance by the planting of trees and shrubs on factory roofs, deception, through the building of dummies and by the creation of architectural shadows where no building exists, and a variety of other techniques. The author deals with all these methods, and goes far beyond them in telling the history of previous efforts at camouflage. Lt.-Col. Chesney extends the generally understood meaning of the word to include the disguise of military intention. Several chapters discuss the activities of Napoleon, Stonewall Jackson and the generals in the Boer War and World War I from this point of view. The book should be of especial interest and value to architects, not only because they are perhaps the best equipped for such work of all professional groups, but also because it provides a comprehensive background for a more detailed approach to the field.

"Planned A.R.P." was prepared by the London firm of Tecton, and offers striking evidence of the value of architectural services for civilian defense. Tecton had worked in London as architects for the Borough of Finsbury, and immediately after the crisis of September, 1938, the firm was approached by the Council to advise on the suitability of the available basements for use as public shelters. This led to a complete survey

(Continued on page 98)



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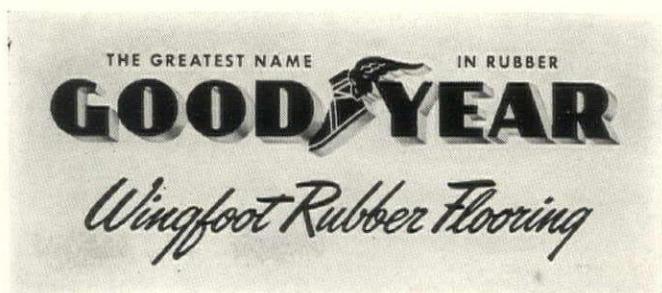
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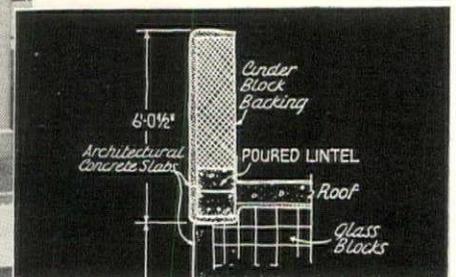
fabrication, scientific proportioning, vibration, low water-cement ratio, reinforcing with heavy galvanized, welded fabric, and selection of aggregates.

No matter what *your* next job may be, investigate thin, precast Architectural Concrete Slabs. They are available from producers throughout the country. For more complete data, see Sweet's Building File, Section 4/21, or write Universal Atlas Cement Company (United States Steel Corp. Subsidiary), Chrysler Bldg., New York City.

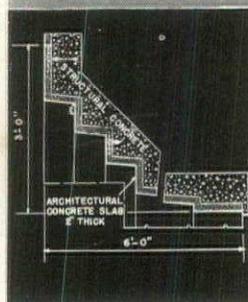
OFFICES: *New York, Chicago, Philadelphia, Boston, Albany, Pittsburgh, Cleveland, Minneapolis, Duluth, St. Louis, Kansas City, Des Moines, Waco, Birmingham.*



OFFICE BUILDING—Ansonia Manufacturing Co., Ansonia, Conn., faced with thin, precast Architectural Concrete Slabs. Use of slab as the exterior and bottom form for the structural lintel is shown in the detail. Note the size of this slab, 14'6" long by 6'1½" high. The company name and the design at top of each fluted column are of black aggregate and were cast into the slabs during fabrication. Architect, Brown and Von Beren; Slabs by the Dextone Co.—both of New Haven.

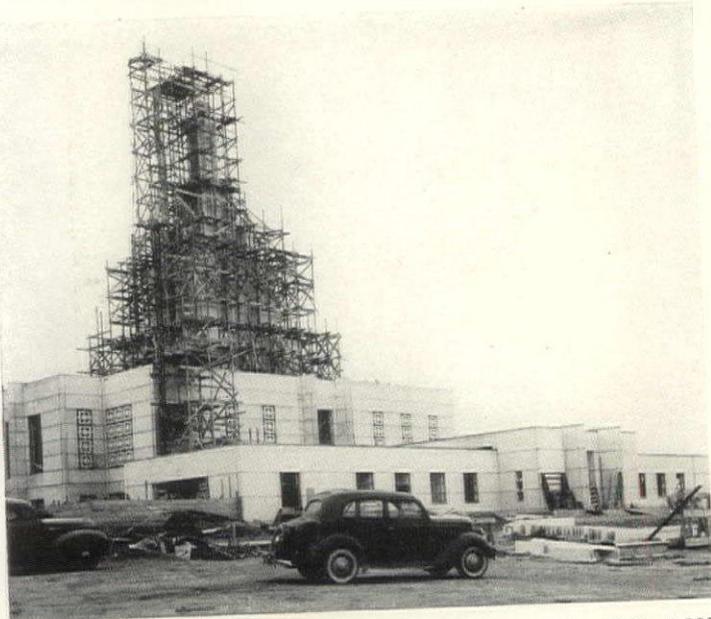


NAVY PROJECT—The David W. Taylor Model Basin, Carderock, Md., faced with precast slabs made with crushed quartz and Atlas White cement. Slabs 2" thick and up to 8' x 10' in area, served as exterior forms, as shown in cross-section of lintel. Half the slab thickness was considered effective structurally. Designed by Rear Admiral Ben Moreell, Chief, Bureau of Yards and Docks, U. S. Navy; Contractor, Turner Construction Co., N. Y.; Slabs by Dextone Co., New Haven, Conn.



ARCHITECTURAL CONCRETE SLABS

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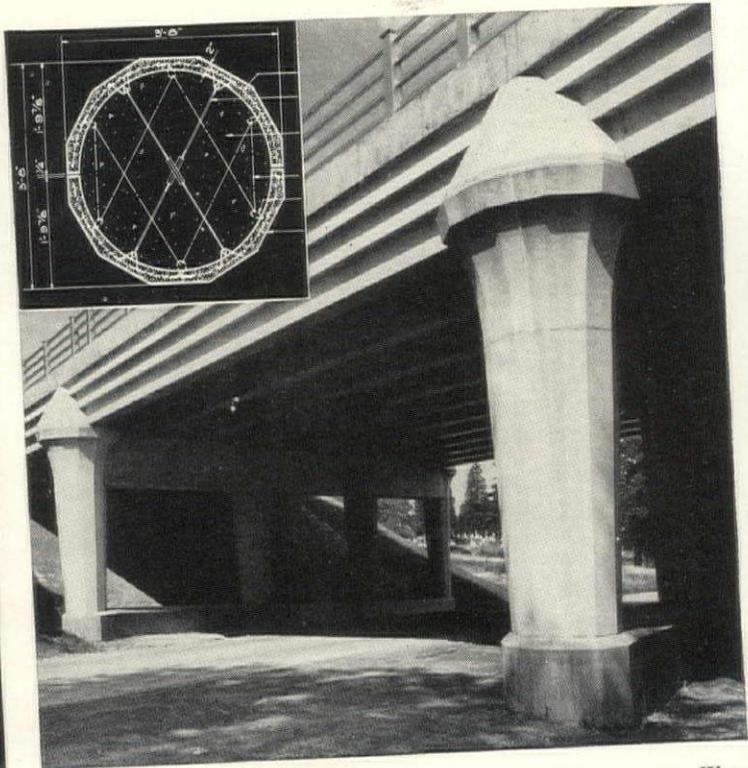
CHURCH BUILDING—Church of the Latter Day Saints, Idaho Falls. 1,000 tons of precast slabs made with crushed onyx and Atlas White cement were used for this tabernacle. These slabs were manufactured in four months while stone masons and quarry workers labored forty years to shape the stones for the Salt Lake Tabernacle. Architect, J. T. Fetzer; Slabs by Otto Buehner & Co.—both of Salt Lake City.



SLABS FOR INTERIORS—Washington National Airport. Attractive texture of exposed aggregates in an almost infinite variety of colors and patterns is a feature of thin, precast slabs. Texture may be pre-inspected. This interior is of buff quartz aggregate embedded in a matrix of Atlas White cement. Architect, H. L. Cheney, Washington; Contractor, John McShain, Inc., Philadelphia; Slabs by Dextone Co., New Haven, Conn.



MODERNIZATION—Citizens Bank, Conover, N. C. Thinness of slabs, normally 2", invites use for modernization, as this frequently eliminates need of ripping off old front to keep within building line. Note that coping is integral with the parapet slab and extends to the window. The large size of the slabs made it possible to use only four units in the entire height of the façade. Architect: Robert L. Clemmer, Hickory, North Carolina; Contractor, Herman-Sipe Co., Conover, N. C.; Slabs by Arnold Stone Co., Greensboro, N. C.



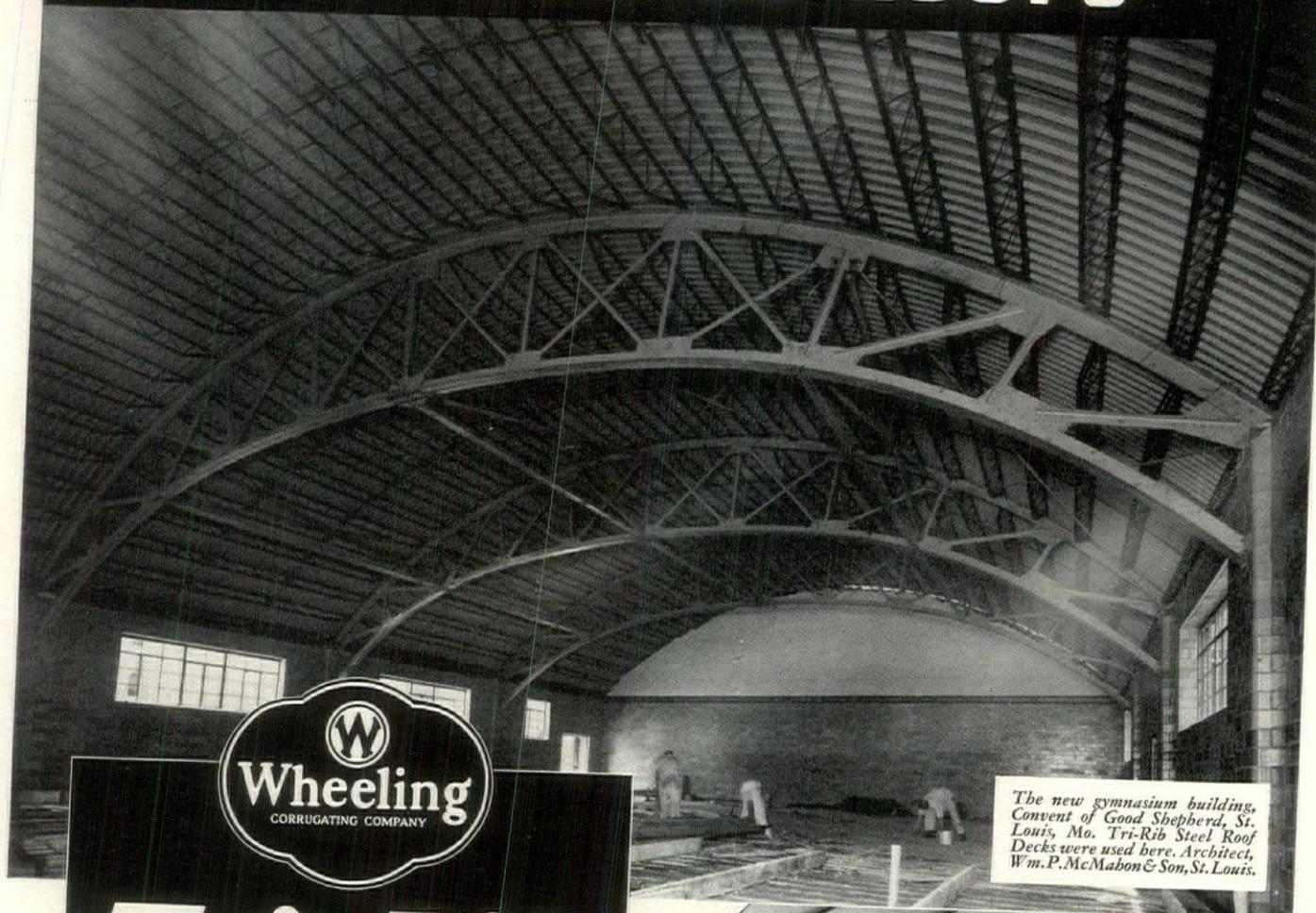
BRIDGE CONSTRUCTION—By-pass on Storm King Highway near West Point. Precast slabs, 2" thick, were used in the columns and architrave. Column slabs were placed and tied together by rods fastened to anchor clips welded to the embedded reinforcing mesh. Structural concrete was then placed inside the column, resulting in "a structure being poured into its own skin or hide." Forms thus were eliminated. Engineer, Dept. of Public Works, Division of Engineering, State of New York; Contractor, Lane Construction Co., Meriden, Conn.; Slabs by Dextone Co., New Haven.

AF-ACS-32

MADE WITH ATLAS WHITE CEMENT



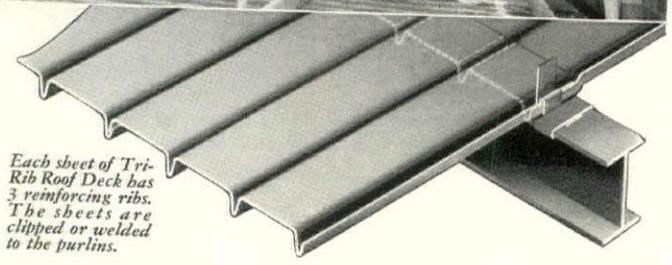
A *Fire-Safe* BASE FOR ARCHED ROOFS



Wheeling
CORRUGATING COMPANY

Tri-Rib
STEEL ROOF DECK

The new gymnasium building, Convent of Good Shepherd, St. Louis, Mo. Tri-Rib Steel Roof Decks were used here. Architect, Wm. P. McMabon & Son, St. Louis.



Each sheet of Tri-Rib Roof Deck has 3 reinforcing ribs. The sheets are clipped or welded to the purlins.

CAN BE QUICKLY APPLIED

Because the COP-R-LOY plates which comprise Wheeling Tri-Rib Steel Roof Deck are pre-fabricated for every job, they can be assembled in record time. Arched roofs and unusual applications do not present any difficulties. The Tri-Rib sheets are made for arched roofs to any desired curvature and are furnished in any length up to 22 feet. They can be quickly clipped or welded to the purlins. Moisture can never cause this roof deck to swell, warp, or buckle and crack open the insulation or protective roofing paper above it. Genuine COP-R-LOY—Wheeling's famous rust-resisting alloy, provides lasting protection against the weather and also offers maximum fire-resistance. Ask about Tri-Rib Steel Roof Deck on your next building!

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ACCENT ON APPETITE APPEAL

To create an atmosphere of restful spaciousness and, at the same time, to serve delicious meals quickly and efficiently within the narrow confines of a dining car, is a problem to challenge the cleverest of us.

Cleverly indeed, H. W. Quinlan, Dining Car Superintendent of the New York, New Haven and Hartford Railroad, and Lurelle Guild, prominent industrial designer *did* solve it.

Drawing inspiration from New England's colorful history, they designed fourteen diners, each unique and interesting. Through ingenious use of mirrors engraved with historical subjects, by emphasis on horizontal surfaces below indirect lighting in the transom roof, by spotting narrow bands of light above each table and by

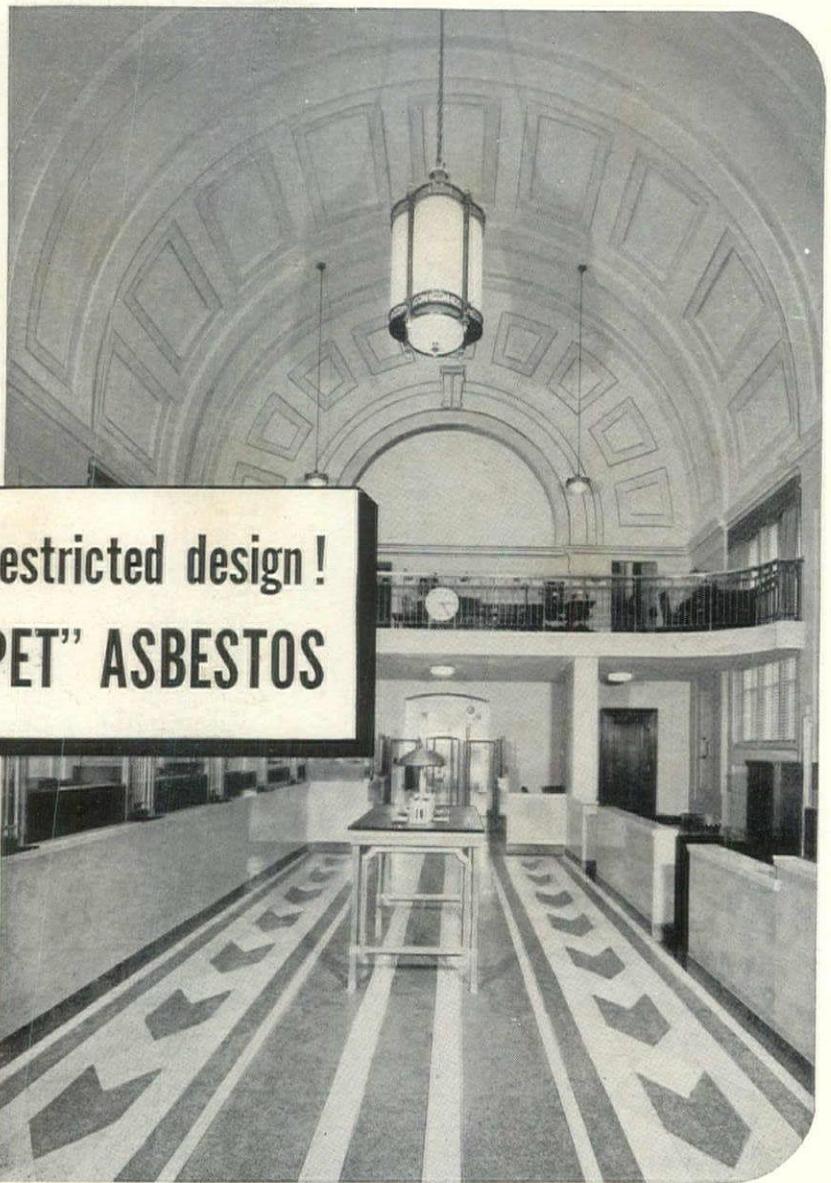
harmonizing soft pastel colors, they overcame the inflexibility of steel walls.

Important in the functional design are Fabrics by Chase. On the walls of *The Colonial* and her "sister" diner, *The Patriot*, a special Chase Coated Fabric helps dampen noise and vibration. Its military-tan color increases apparent width and lends an atmosphere of restful serenity. Avoiding color contrast that would tend to destroy the illusion of space, military tan is repeated in the chair upholstery.

Fabrics by Chase can make an equally artistic and practical contribution to almost any decorative problem. We will be glad to send samples of REDO and LEATHER-WOVE Coated Fabrics, VELMO Upholstery and SEAMLOC Carpet.

CHASE

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Good acoustics with unrestricted design! K&M SPRAYED "LIMPET" ASBESTOS

AS an architect wouldn't you be puzzled by the problem of specifying an efficient acoustical material for this barrel arch with its recessed panels? But it's no problem at all when you know about K&M Sprayed "Limpet" Asbestos, the remarkable sound deadening material that can be sprayed on. It frees you entirely from restrictions imposed by the shape or composition of the surface to be covered.

The officers of The First Trust Company, Wellsville, N. Y., are highly pleased at the improvement "Limpet" has made. It was applied on the arch to a thickness of three-quarters of an inch, and also on the ceiling under the balcony. The acoustical properties of the lobby have been immensely improved, and painting the "Limpet" has restored the room to its exact original appearance. Repainting will be easy, for "Limpet" can be given as many as ten coats without noticeably reducing its acoustical properties.

The bank's customers enjoy the quiet and pleasant atmosphere of the lobby. It is easy now to converse without raising the voice or being disturbed by overtones and echoes.

K&M Sprayed "Limpet" Asbestos has no equal as an acoustical material and is also highly efficient as a heat insulator. Its thermal conductivity is only .31 at 75 degrees F. A coating $\frac{3}{4}$ inch thick has a noise reduction coefficient of .70; by applying the proper thickness any practical degree of sound absorption may be obtained.

Acoustics were greatly improved after The First Trust Company, Wellsville, N. Y., treated this barrel arch with Sprayed "Limpet" Asbestos.

Write Dept. 23 for the new A. I. A. Catalog giving full details on "Limpet." No charge, of course.

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COMPANY, AMBLER, PENNSYLVANIA



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and it gives the 14 reasons for using asphalt tile

Know them all

See the 44 colors and countless pattern possibilities

Build from the floor up!



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Color-Toning

THE SURE WAY TO PLAN
PERFECTLY BLENDED ROOFS

The K&M Color-Tone Work Kit allows you to design a roof in miniature and accurately visualize the finished work. Small replicas of "Century" shingles in the attractive colors shown at left may be attached to a layout sheet, allowing your client to see in advance just how the finished roof will look. The roofer follows this color chart when applying the shingles, faithfully carrying out your design.

You will enjoy working out an individual plan with these harmonious color tones. Favorites are a cool blend of greens, as shown below, or a warm blend of reds and tan. The popular Lindenwold Shingle reproduces the mellow shades of an old roof that has been weathered by sun and snow for generations. Whatever the location or construction of the home, you can design a "Century" roof that will be in perfect harmony.

K&M "Century" No. 92 shingles are made of asbestos-cement in the beautiful and permanent tones you see on this page. Resistance to weather and fire are inherent. Upkeep is negligible, roofs built thirty years ago have never needed repairs.

In residential building operations Color-Toning offers an inexpensive way of obtaining a pleasing variety in appearance.

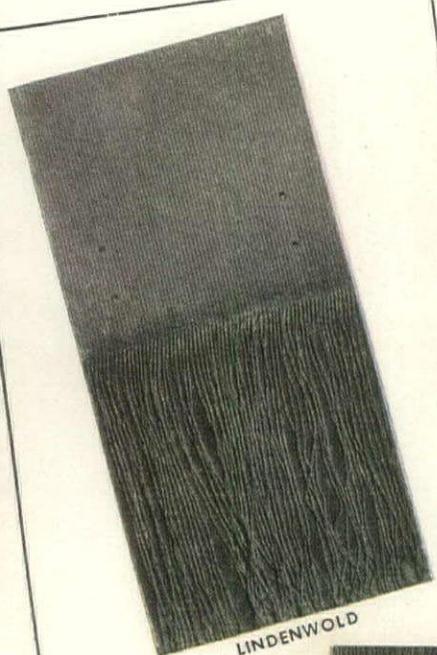
Only K&M "Century" roofing shingles offer you this opportunity to achieve a preplanned Color-Toning. Other K&M "Century" asbestos-cement shingles, both roofing and siding, are available at lower cost to insure lasting beauty and protection.

IT'S FREE...Have you written for your Architects' Work Kit for easy visualization of Color-Toned roofs? Address Dept. 01.



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LINDENWOLD



OLIVE GREEN



DELL GREEN



OXFORD BLACK



RUST



ROYAL RED



SUNSET RED



HEATHER



LEAF TAN

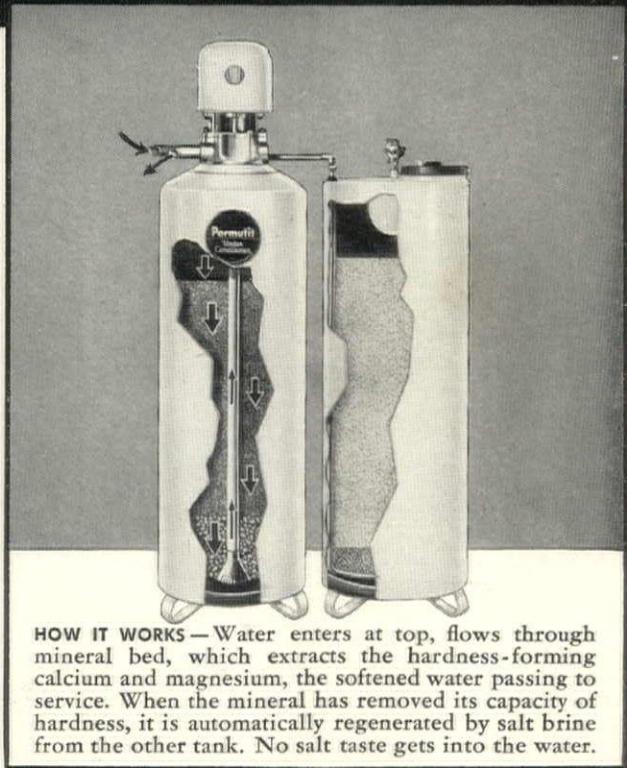
The Lindenwold Shingle (above) was reproduced directly from a full-size shingle reduced 6 times in size. The swatches show the eight other colors in the same reduction. Notice the beautiful graining.



For hard water
turbid water
aggressive water



AUTOMATIC UNIT of Permutit Home Water Conditioner, attached to pipes in cellar, makes filtered soft water flow from every faucet...without adding chemicals. Simple, compact, Permutit requires no attention...it's fully automatic!



HOW IT WORKS—Water enters at top, flows through mineral bed, which extracts the hardness-forming calcium and magnesium, the softened water passing to service. When the mineral has removed its capacity of hardness, it is automatically regenerated by salt brine from the other tank. No salt taste gets into the water.

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Permutit softened water makes quicker, richer suds for luxurious bathing... whiter washes with less work... protects plumbing... makes other household appliances work better. Permutit makes amazing savings, too

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Why not build this luxury, this labor-saving, this economy into *your* clients' homes? Permutit can be installed on low monthly payments... financed with the house.

Mail coupon for specifications, capacity tables and detailed description of models. Or tell us about your clients' water problems. Permutit's expert advice is free.

PERMUTIT

WATER CONDITIONING HEADQUARTERS

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Please send me complete information on Permutit household water conditioning and special slide rule for sizing of models.

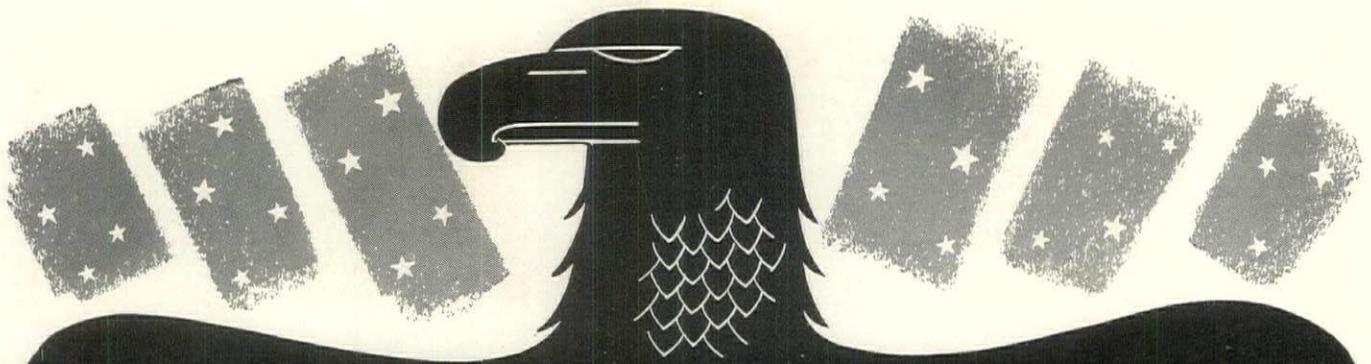
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*Trademark Reg. U. S. Pat. Off.



DEFENSE FIRST!

An open letter from Milcor Steel Company

OUR COUNTRY is engaged in an all-out full-speed defense program, building the equipment necessary for the defense of this nation against aggressor countries — to maintain the freedom of the seas and also, under the provisions of the Lend-Lease Act, to help other democracies in order that they may help us in our defense of the American Way of Life.

Milcor is helping in that program, helping by supplying necessary building material for the construction of cantonments, navy bases, airports, defense housing, and industrial plants for the production of munitions. We are also manufacturing supplies and equipment for the several branches of our armed forces.

Because our products are made of steel and because steel is on the critical list

of defense materials, we know perfectly well that we cannot carry on our regular business in a normal way. In the face of these facts, we are not forgetting our obligation to our regular trade. We understand their need for our products in order to keep their businesses operating and to provide employment for their people.

We are continuing to supply our regular trade on a restricted basis in proportion to the amount of raw material available to us.

Our first obligation now is to help in every possible way to aid the defense program. Beyond that we will continue to serve our trade as best we can under present conditions.

MILCOR STEEL COMPANY

President

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F-211

LOW-COST HOUSES

On the following pages, THE ARCHITECTURAL FORUM is privileged to present advance data on 46 of the best and most recent architect-designed defense houses. The importance of this work can scarcely be exaggerated. Not only is it a decisive contribution to the defense effort; not only is it far and away the best Government-sponsored housing done to date; not only is it a vivid demonstration of the social and economic value of unhampered architectural service—its full significance is much larger. It is impossible to believe that a public which has experienced the advantages of imaginatively planned, large scale development, that builders who have tested and proved its economy,* that architects who have enjoyed the enlarged scope it gives their talents will not carry this approach beyond the limits of Government activity into the field of private enterprise, and beyond the defense emergency into the post-war period. Defense housing, whatever its faults, will have a profound effect on future building activity in every field; at its best, as in these examples, it is a distinct challenge to traditional patterns from top to bottom of the building picture.

And these are no mere generalities. They will not seem so to the 476 families who will live around the delightful little park in the project at Center Line, Michigan (page 229) and realize for the first time what they have been losing as a result of the gridiron street pattern, nor to the 85 families who will benefit from the thoughtful planning of the little houses at Windsor Locks, Connecticut (page 212). Their meaning will be clear to the contractors who built the prefabricated houses at Vallejo, California (page 226) and those who handled the equally efficient job-fabrication of those at New Kensington, Pennsylvania (page 218), and to the manufacturers who found a proving ground of a new type in the experimental units at Bethlehem, (page 236). They will be meaningful to all who are able to observe the first effects of a new way of planning, a new way of building, and a new integration of all of the factors in house building which rivals the organization of skyscraper construction.

*Average total cost of the first 100,000 defense houses including land, utilities, streets, equipment and community facilities is about \$3,900 for units which average slightly more than two bedrooms each.

DEFENSE HOUSE ARCHITECTS

The new Government policy which brought these designs into being dates from April 5. Since that time, better than 75 per cent of the defense houses put under contract — almost 30,000 dwelling units — have been designed by independent, practicing architects. April 5 dates the formation of FWA's new Division of Defense Housing, charged with the operation of all defense houses and, further, with direct construction in addition to that done by PBA, USHA, and other agencies. As the figures indicate, it marks a sharp reversal of the trend which had assigned more than two-thirds of the work of the previous six months to civil service architects in Government bureaus, belated recognition of the fact that the talents of a large group of skilled building experts — the nation's practicing architects — were being willfully wasted at a time when an all-out effort was needed to lift the defense housing program out of Government red tape. (ARCH. FORUM, Mar. 1941, p. 30, *et seq.*)

Since that time, well over a hundred architectural firms have been assigned defense housing projects—projects ranging in size from 20 to 1690 families, and averaging 270 units each. Moreover, the significance of the change in policy which this represents is not limited to such statistics, heartening as they are. Both USHA, working through local housing authorities, and the Defense

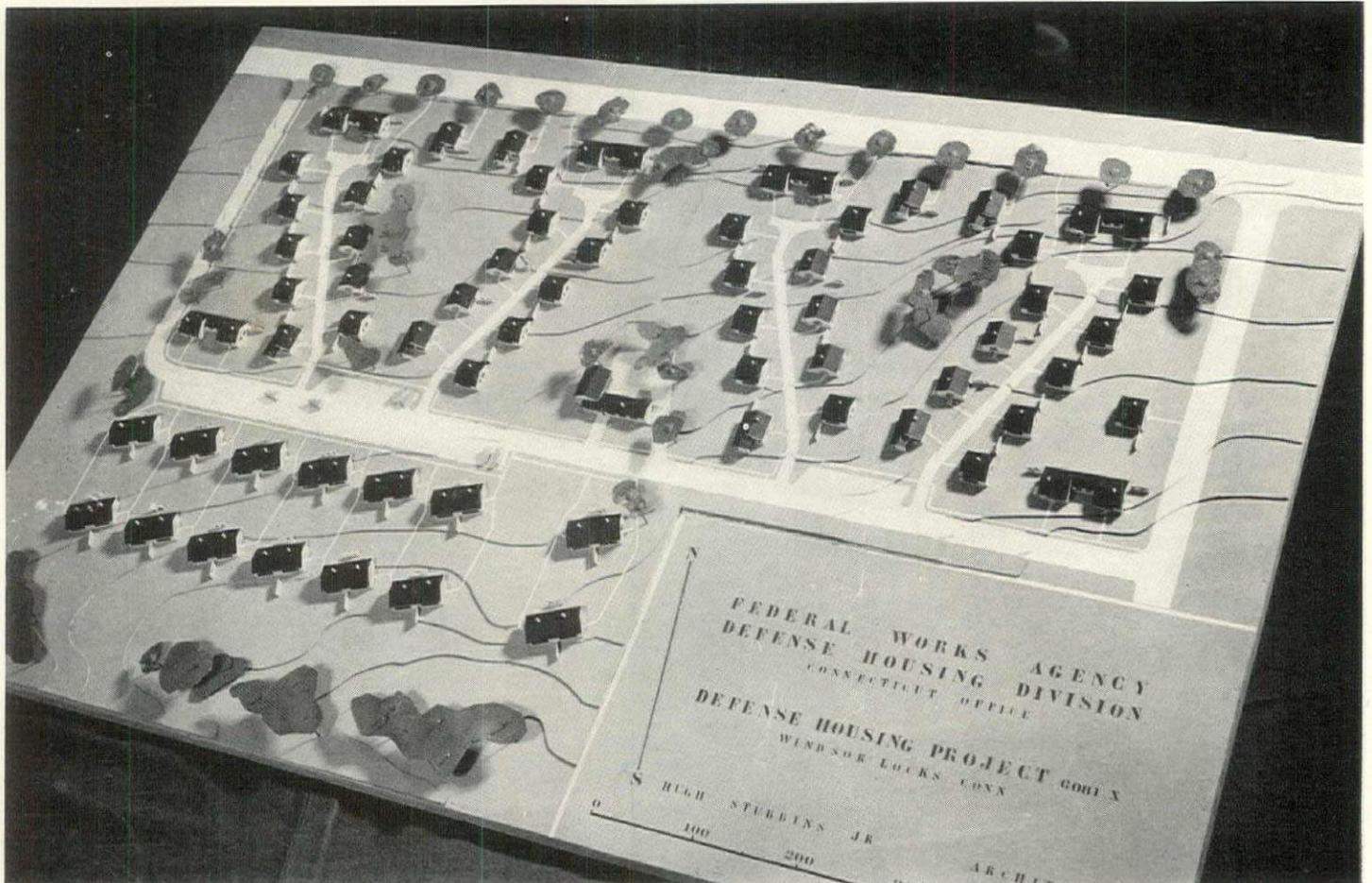
Housing Division in its direct construction are encouraging architects to assume greater initiative and greater responsibility in the execution of work under their control. Architects of many projects have been urged to set aside a number of units for experimentation both in design and construction, "guinea pig" houses whose performance will be carefully watched as time goes on and compared with that of their more conventional neighbors for the improvement of future work.

These experimental units have been exempted from the otherwise ironclad rule limiting the period allowed for preparation of designs and working drawings to four work weeks. That imaginative design is possible even within the standard time period, however, is demonstrated by the fact that many of the experimental designs were complete before work on the balance of the project was well under way, while many of the units not designated "experimental" are equally interesting solutions of the defense housing problem. Both types are included in the examples which follow.

Note: It will be recalled that as long ago as March 1941 THE FORUM attacked the Government's defense housing policy, called for the employment of private architects, insisted this would result in vastly better defense houses. The adoption of this program achieves its first vindication, but by no means its last, in the following pages. —ED.

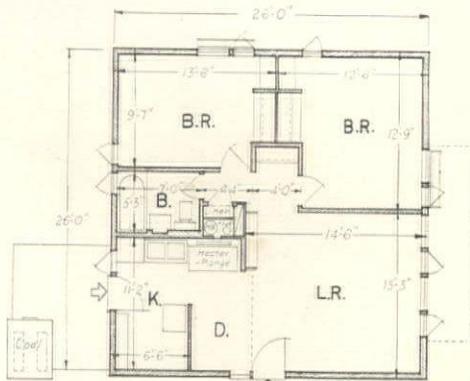
2 HOUSE TYPES, TWO & THREE BEDROOMS

HUGH STUBBINS, JR., ARCHITECT

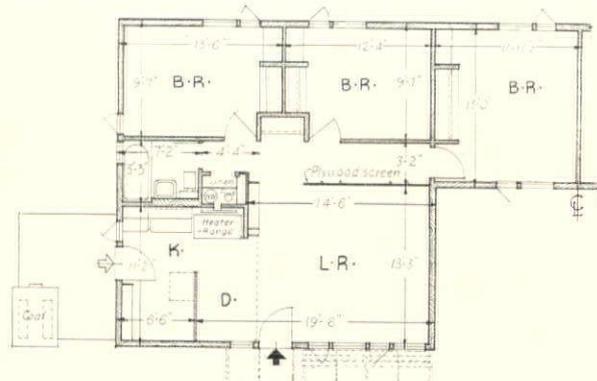


Robert J. Keller

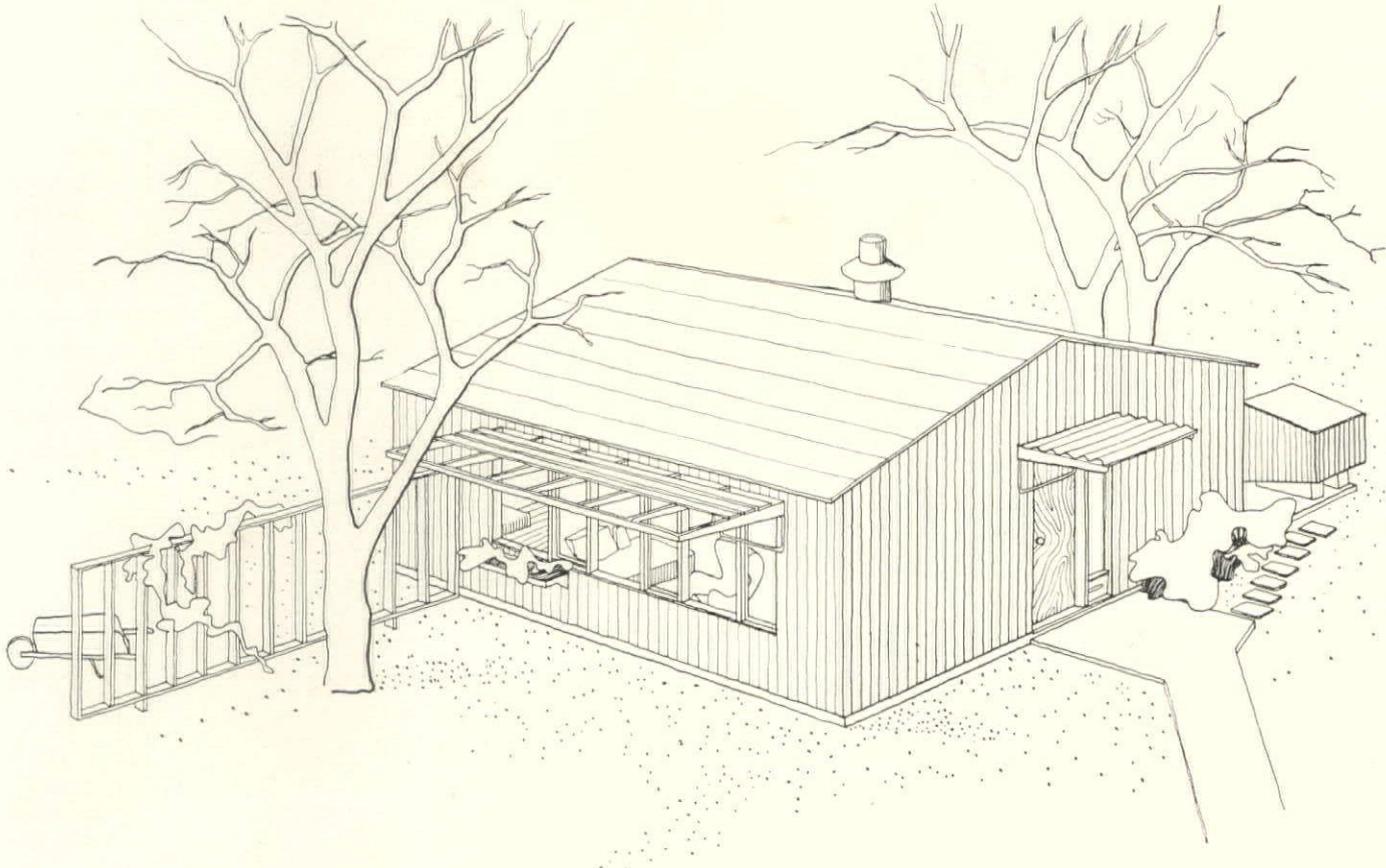
DEFENSE HOUSES AT WINDSOR LOCKS, CONN.* HUGH STUBBINS, JR., ARCHITECT



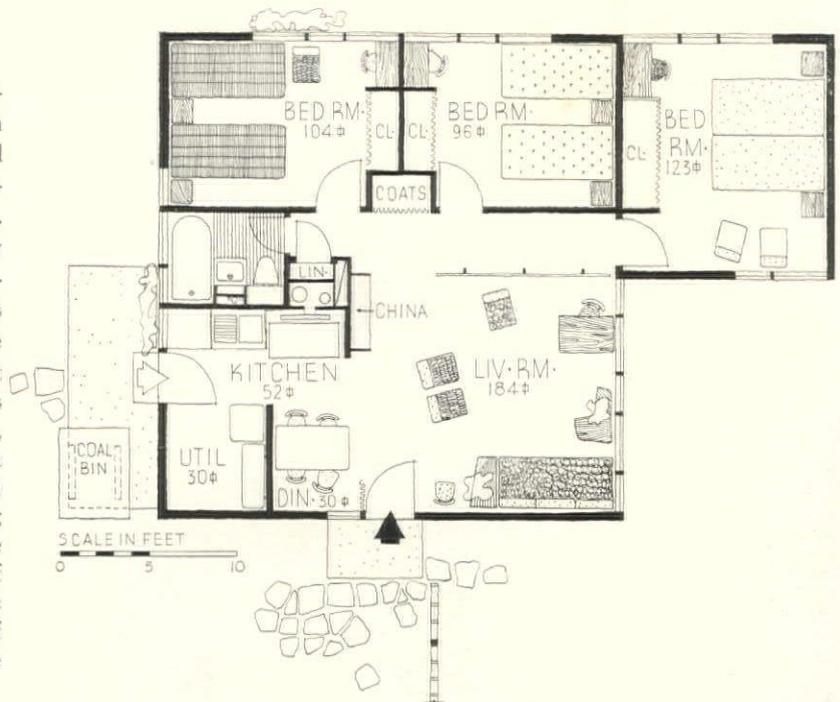
ONE STORY, 2-BEDROOM UNIT



ONE STORY, 3-BEDROOM UNITS

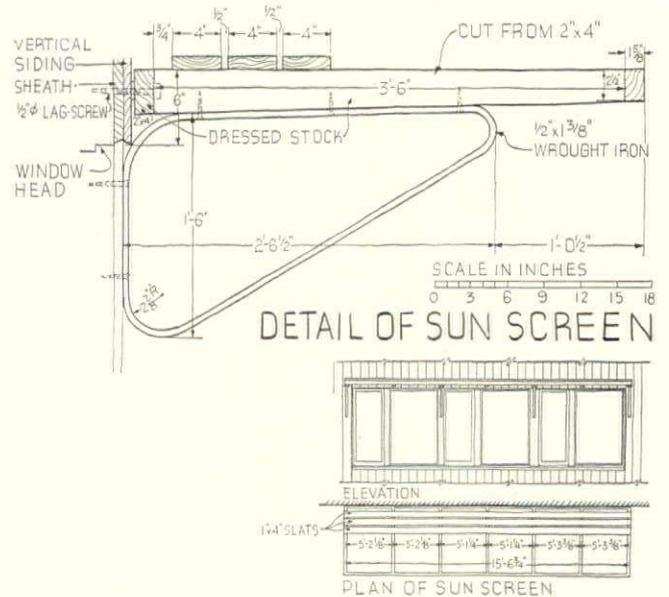
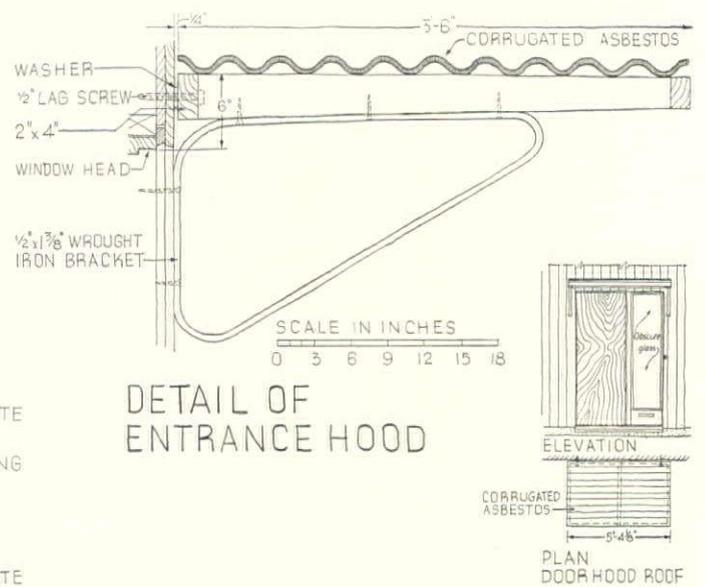
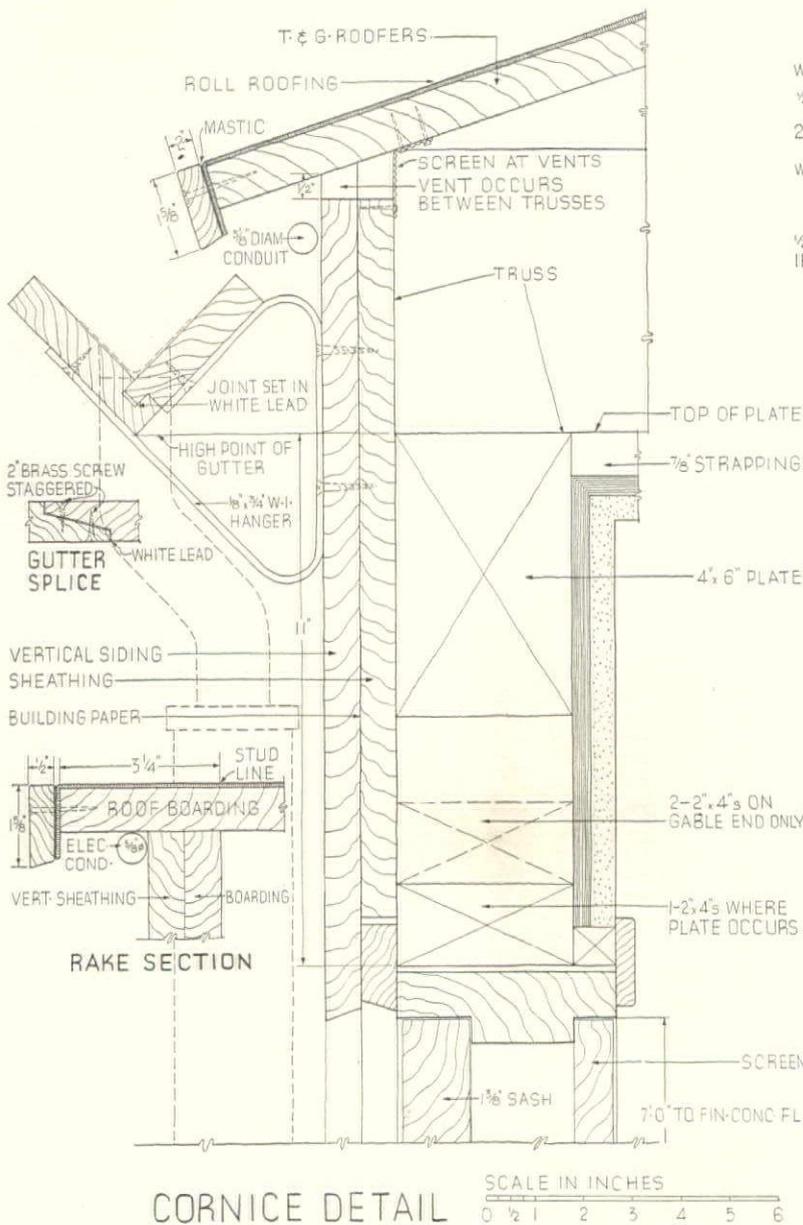
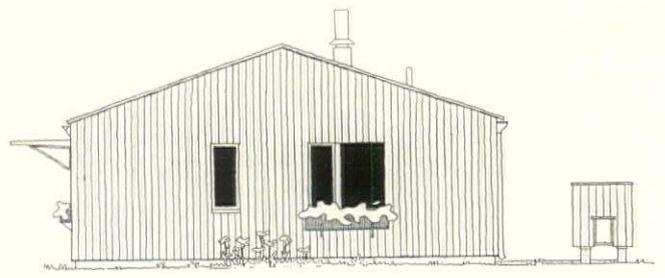
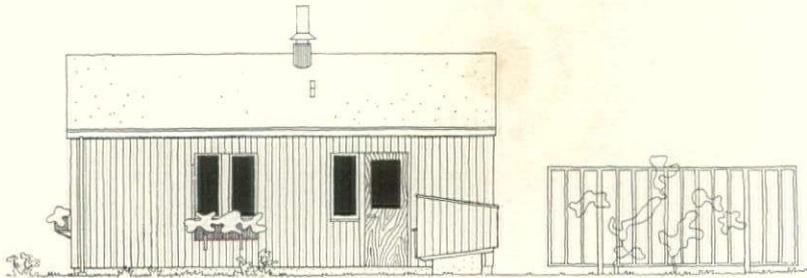
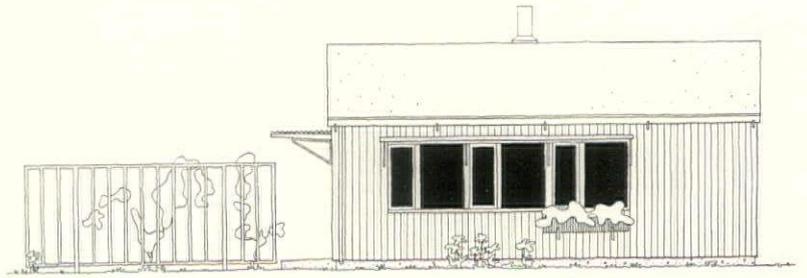
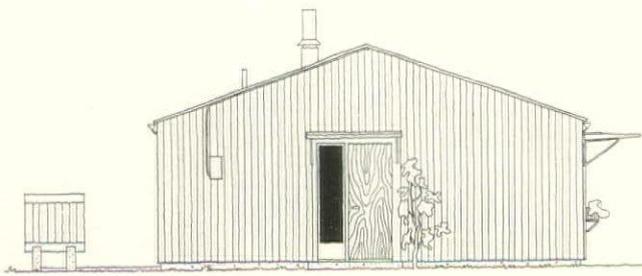


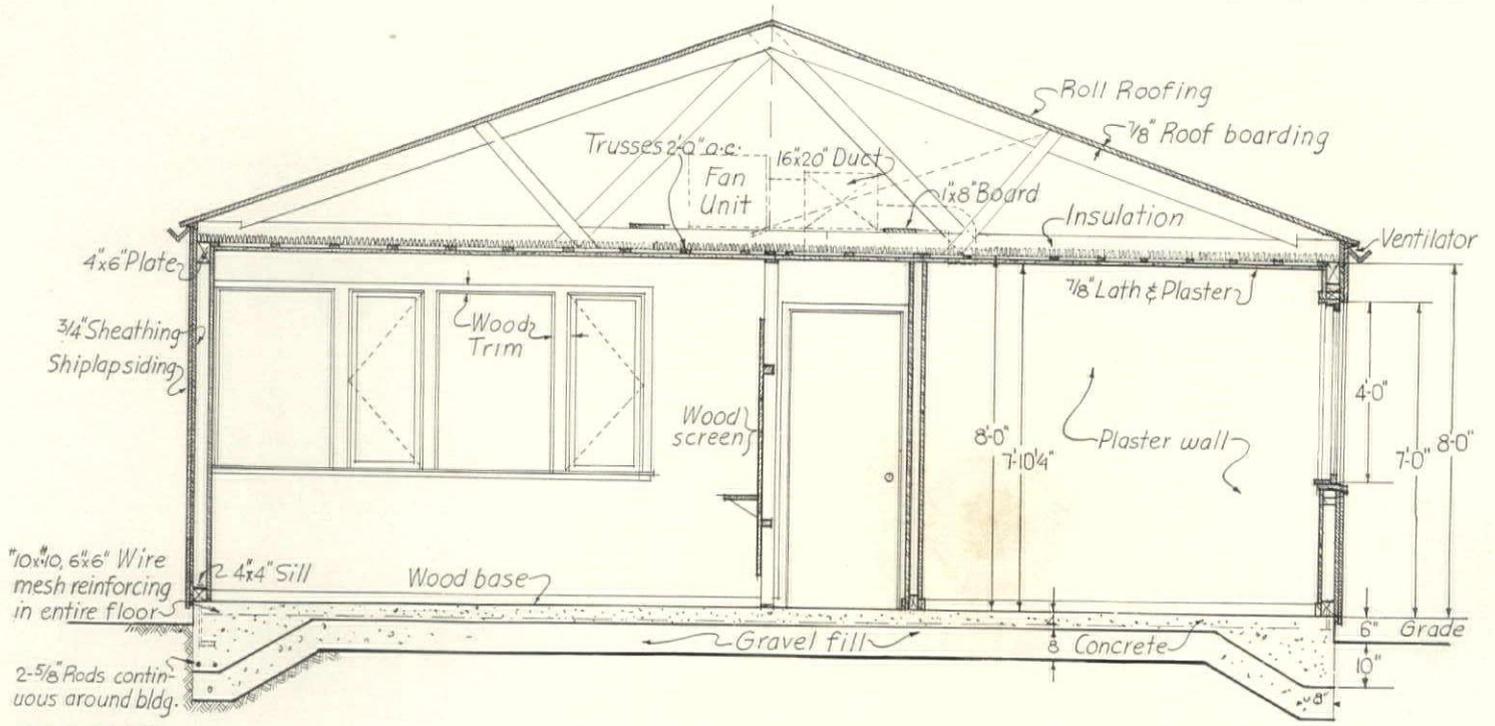
Only a tiny fraction of the whole defense housing program, this 85-family project looms large and important in its scale of accomplishment. The site plan is simple and orderly, yet provides unusually attractive vistas and exceptional outlook and privacy for the individual houses. Only two types of units are used, but considerable variety has been achieved by roofing the houses in opposite directions and by combining the plans into semi-detached units in various ways. Most important, the unit plans, while basically similar to the arrangement typical of low cost work, have been studied with exceptional thoroughness and outstanding effect. In the furniture plan at the right, note especially how provision for dining is made in such a way to increase the apparent size of the living-room while maintaining both the convenience of kitchen dining and sufficient privacy for the kitchen itself; how the placing of the entrance door avoids the common fault of turning the living room into a corridor for cross-traffic from all parts of the house; use of screen wall to set off bedroom circulation in the three-bedroom plan. Average cost per unit: \$2,980.



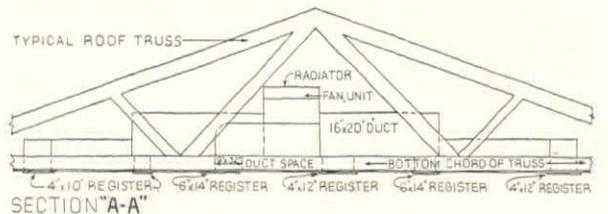
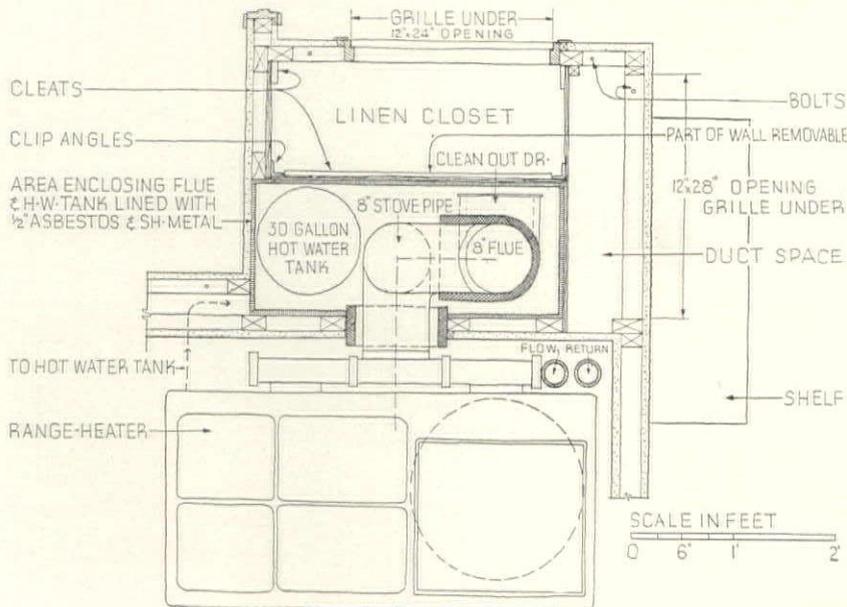
*Constructing agency: FWA Division of Defense Housing.

HOUSES AT WINDSOR LOCKS, CONN.

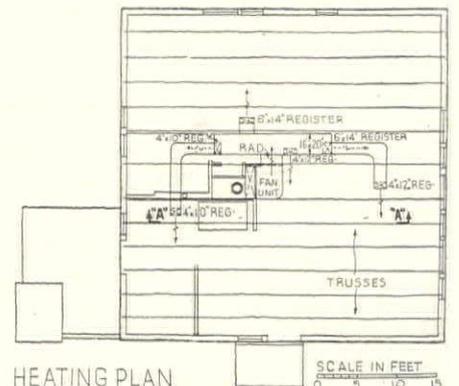




SECTION

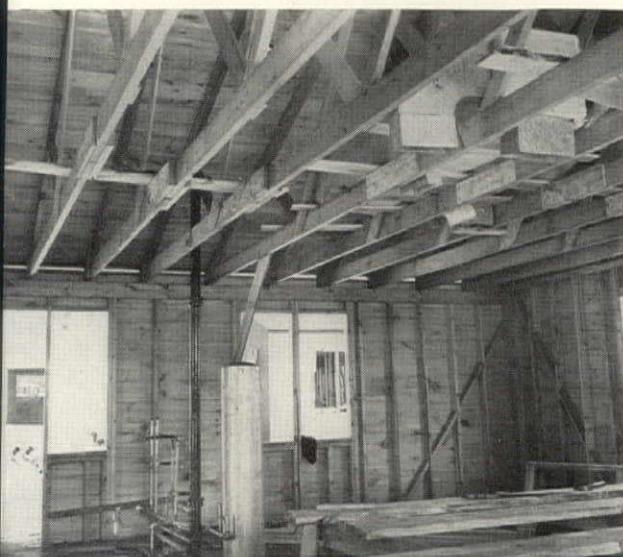


SECTION "A-A"



HEATING PLAN

HEATING UNIT

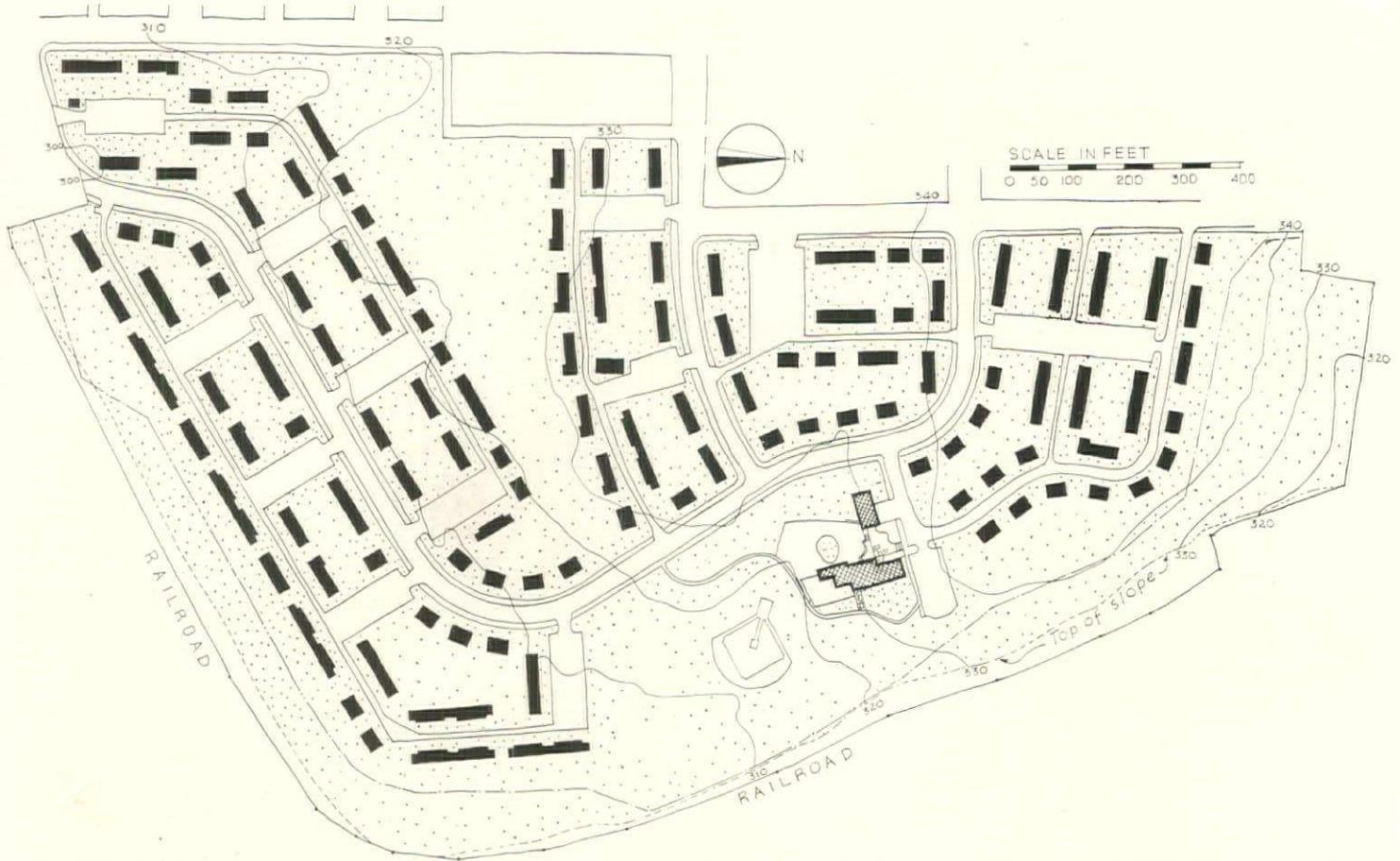


George E. Meyer, Inc.

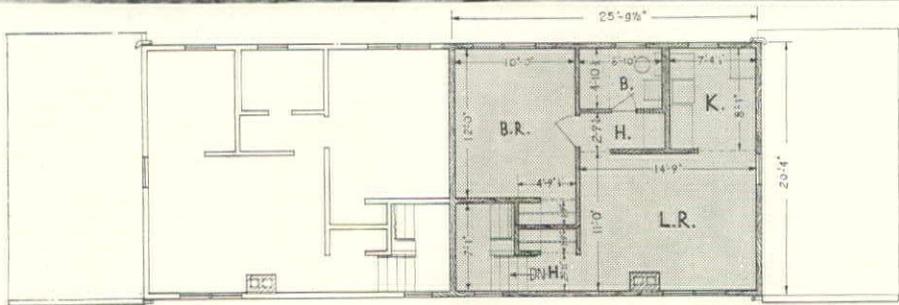


All the mechanical equipment for the house has been combined in a single, carefully designed unit, including kitchen and bathroom fixtures, hot water and heating equipment. Heat for the entire house is provided by a water-back in the kitchen range, which is connected to a convector-blower unit hung between the trusses that supplies hot air for the various rooms through a system of overhead ducts (pictures, left). The domestic hot water storage tank and tile flue for the range are located in an asbestos-lined space behind the linen closet, the back of the closet being removable for repairs.

4 HOUSE TYPES, TWO STORY, ONE TO THREE BEDROOMS

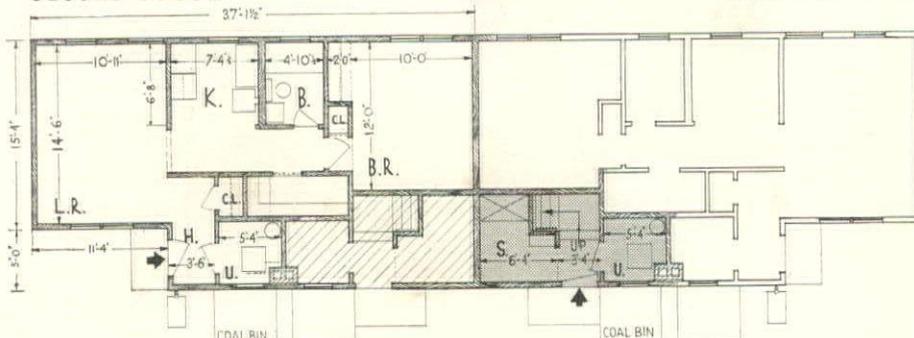


Truman B. Keener



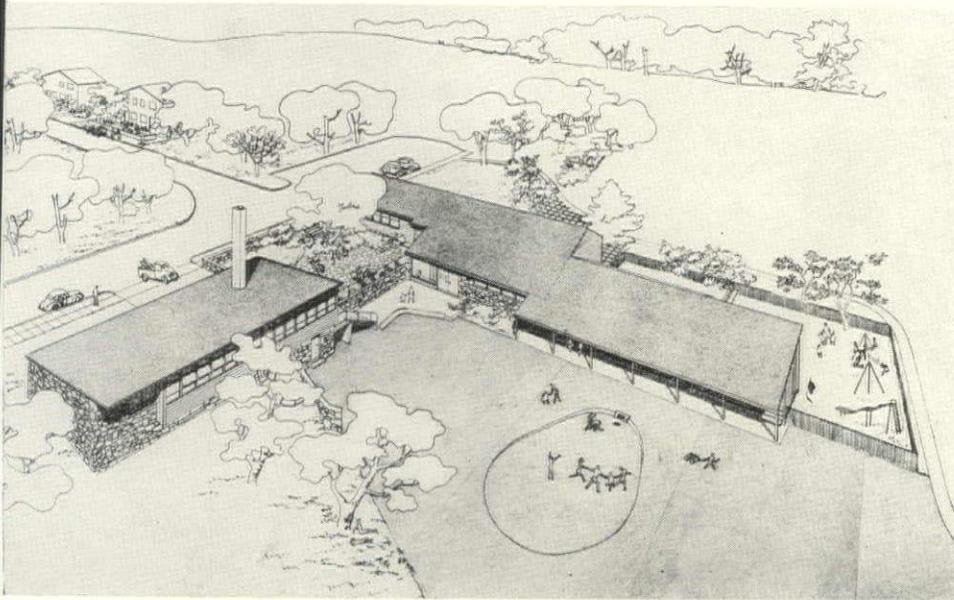
SECOND FLOOR

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

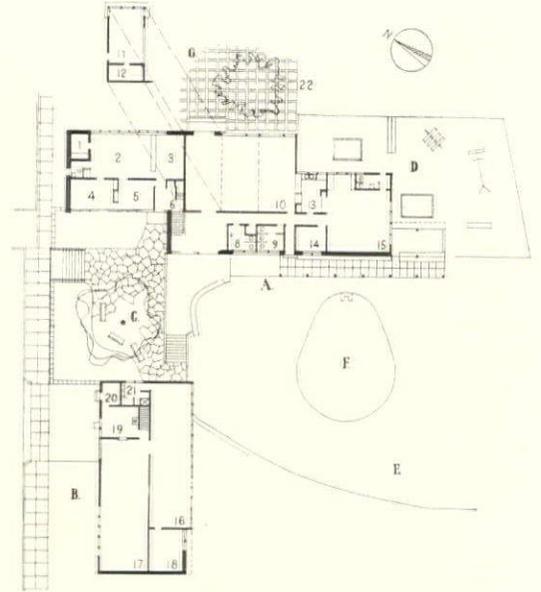


TWO STORY, 1-BEDROOM UNITS

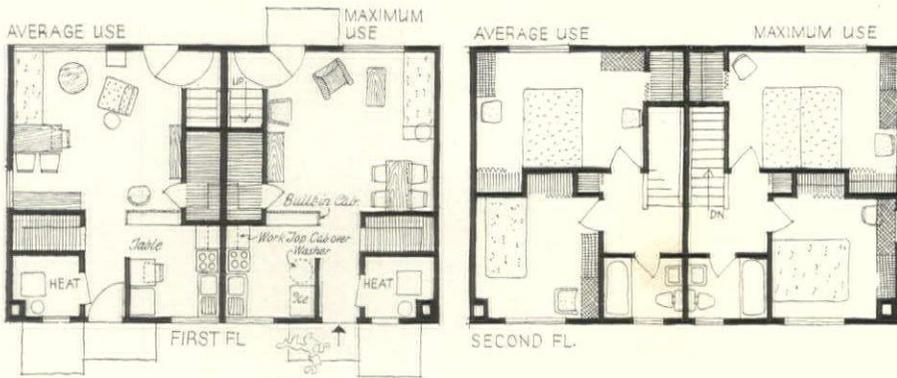
In this development for 450 families the architects have established an excellent relationship between the houses, the community as a whole and its social center. The latter occupies a large plot of ground, centrally located, and has ample space for outdoor recreational activities. Most of the houses are arranged to form loosely defined courts which should offer not only pleasantly varied views, but an entirely adequate number of children's play areas safely removed from the streets. The standard design pattern is that of simple rectangular blocks accented only by doors and windows; an attempt at variation has been made in the adoption of both flat and gabled roofs. From the photographs currently available, it would not seem that this expedient has had much effect on the general appearance of the group.



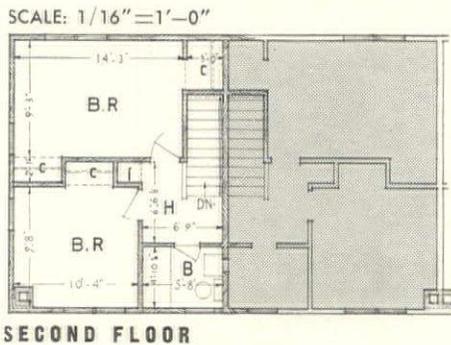
COMMUNITY BUILDING Sketches for this structure show a very fresh and imaginative design, entirely in keeping with the Pennsylvania tradition without resort to spurious styling. The center includes administration offices, meeting rooms, a nursery and a variety of recreational elements.



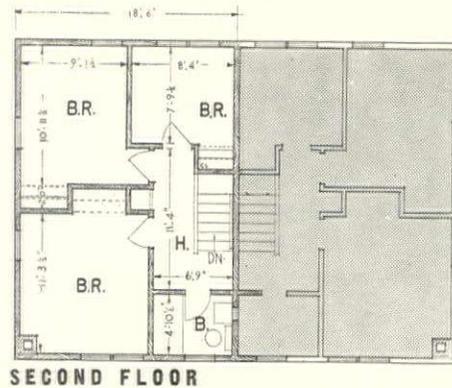
LEGEND. **A.** Administration and social building. 1. Vault. 2. General work space. 3. Public space. 4. Manager. 5. Rental office. 6. Vestibule. 7. Lobby. 8. Men's toilet. 9. Women's toilet. 10. Social room. 11. Meeting room. 12. Storage for meeting room. 13. Kitchen. 14. Nursery clinic. 15. Nursery. **B.** Maintenance building. 16. General maintenance repair shop. 17. Storage. 18. Paint room. 19. Superintendent. 20. Yard station. 21. Toilet and shower room. **C.** Paved terrace. **D.** Children's play yards. **E.** Hard surface play field. **F.** Spray pool. **G.** Social room terrace. 22. Christmas tree.



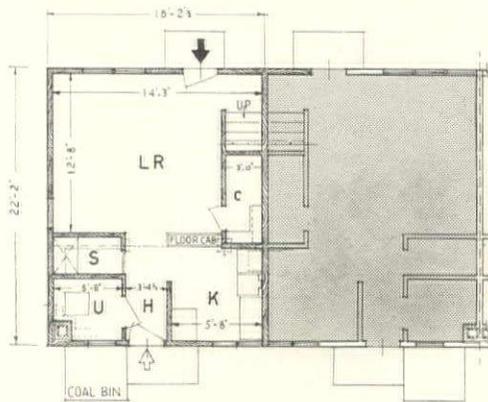
FURNITURE PLAN—2-BEDROOM UNITS



SECOND FLOOR



SECOND FLOOR

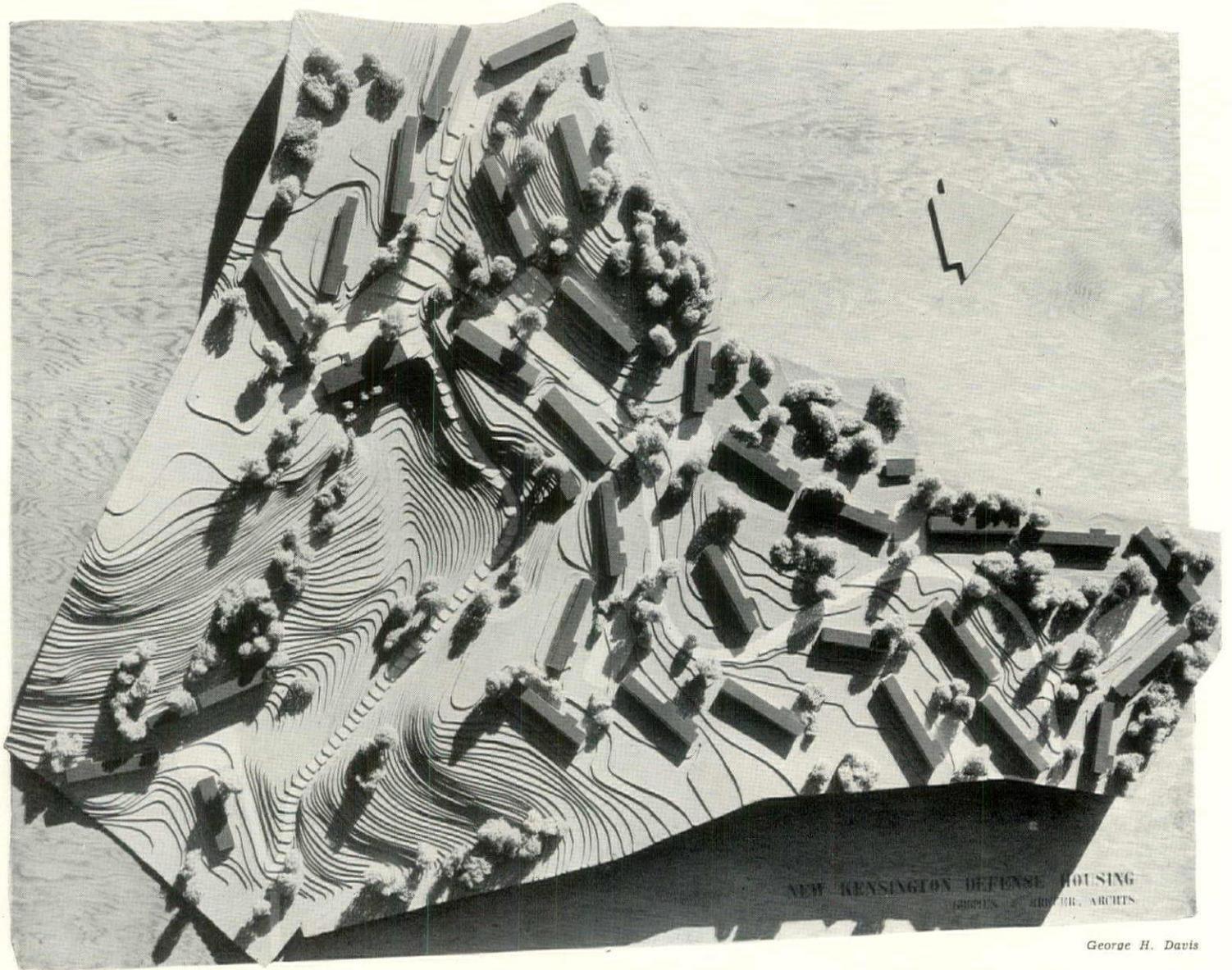


TWO STORY, 2-BEDROOM UNITS TWO STORY, 3-BEDROOM UNITS

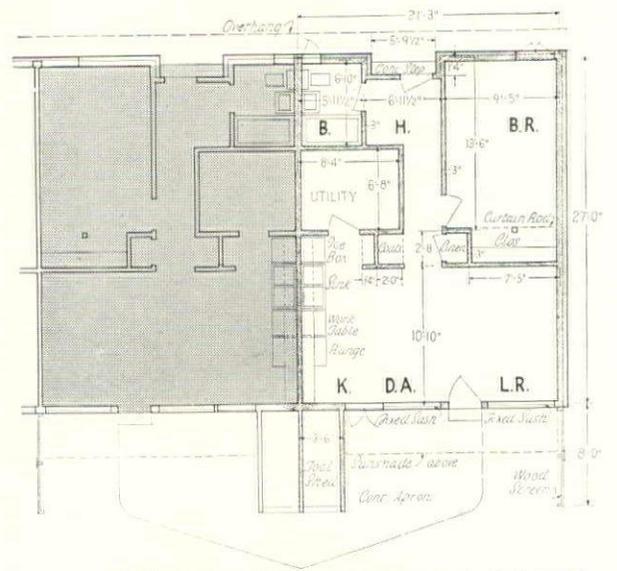
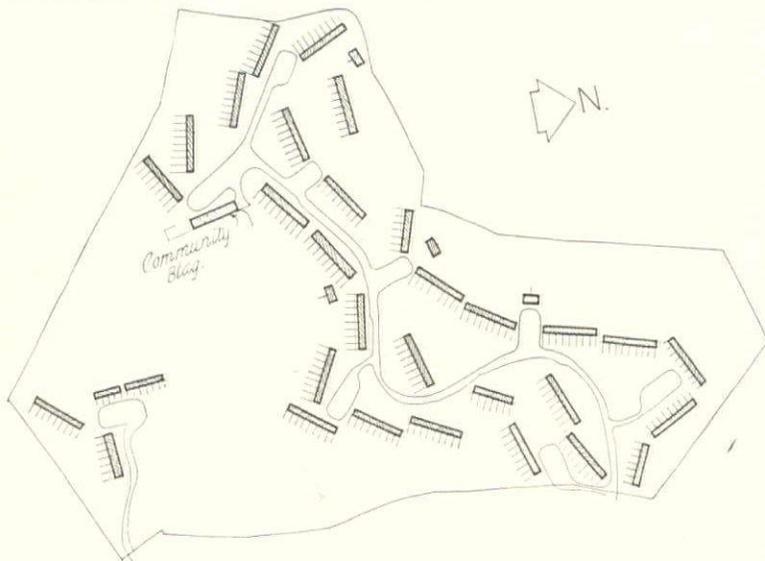
*Constructing agency: United States Housing Authority

UNIT PLANS. The houses are two stories in height, arranged as apartments and as twin houses. In all cases a separate hallway is provided for each tenant. All types have utility rooms with coal-fired forced warm air heaters, and where a family occupies a two story dwelling there is a service entrance immediately adjoining the utility room. The convenience provided by the ground floor utility and storage rooms which serve second floor apartments can hardly be over estimated. This scheme, which is shown on the opposite page, is probably the architects' outstanding contribution in planning. It means that the furnace can be cared for easily, garbage can be kept away from the open kitchens, and room is provided for perambulators, children's tricycles and other toys used out of doors. Average unit construction cost: \$2,726.

3 HOUSE TYPES, ONE & TWO STORY, ONE TO THREE BEDROOMS



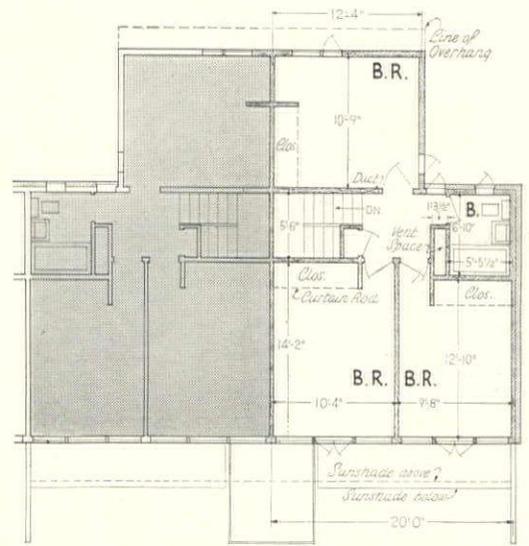
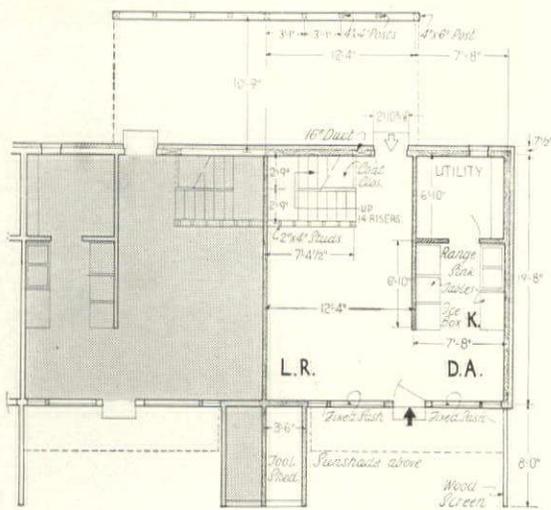
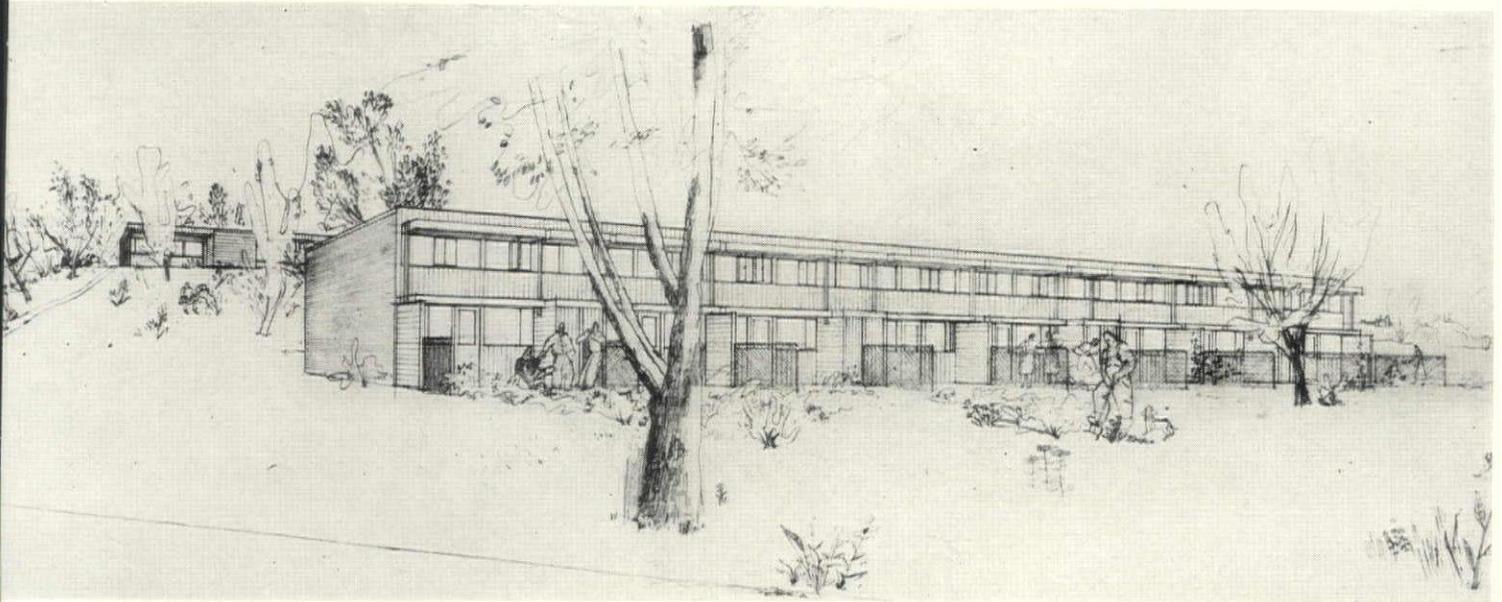
George H. Davis



ONE STORY, 1-BEDROOM UNITS

The architects for this group of 250 dwellings were given a difficult hillside site. Disposal of the various units so that the great majority of the rooms have an excellent exposure was, under the circumstances, an achievement. The expression of this solution is found in the perspective sketches, which show large glass areas and sunshades on one side and comparatively small windows on the other. As in most projects, the common dwelling type has two bedrooms; one- and three-bedroom units are found in only 100 of the houses.

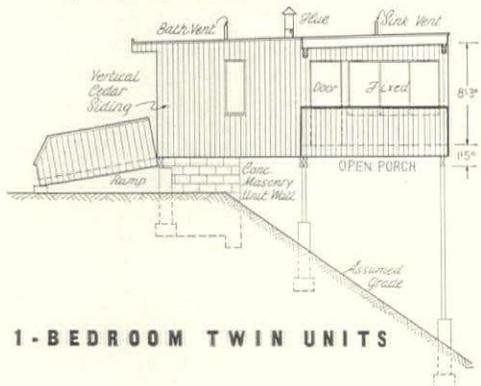
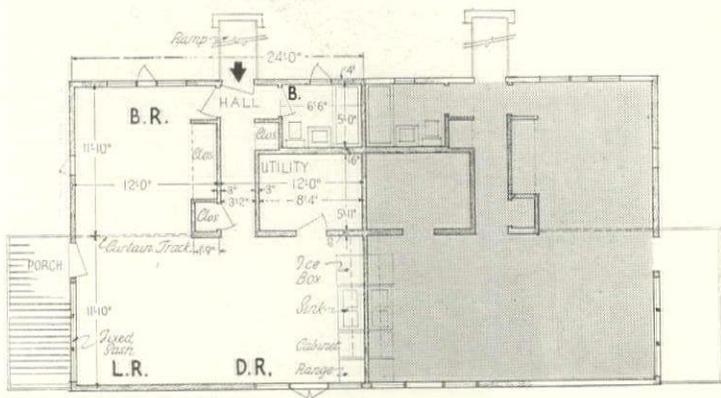
UNIT PLANS. Perhaps the most noticeable characteristic of the plans is the elimination of partitions. Plans on the opposite page show a bedroom, living room, dining room and kitchen occupying an area with no structural separation whatever. Other unusual treatments: a very large area devoted to hall and corridor (plan above) and a two-run stair screened from the living room by open studs. Where a third bedroom is needed, it is placed over a porch.



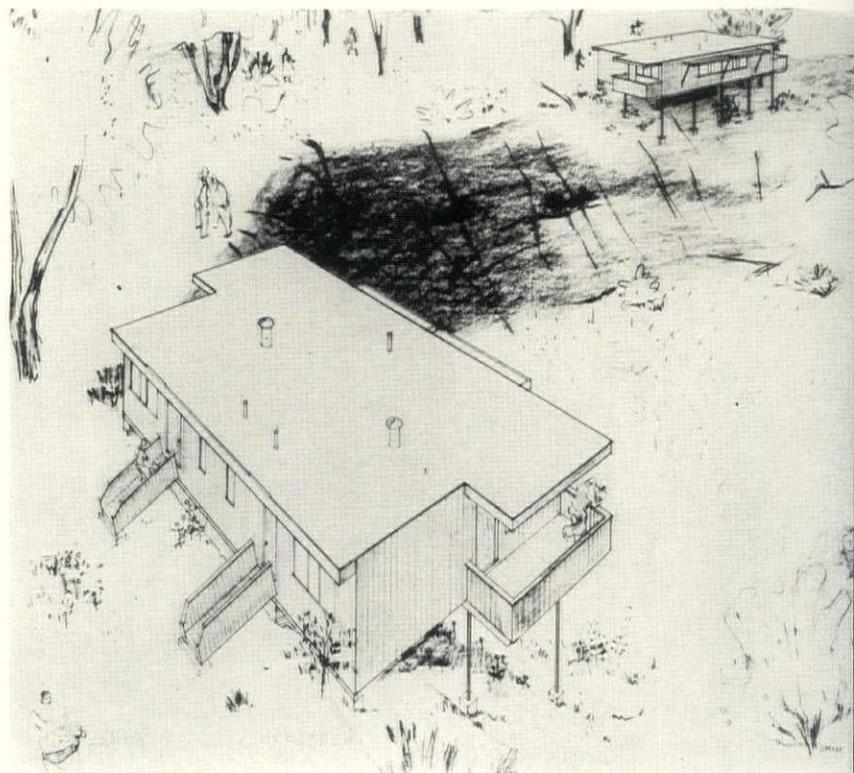
SCALE: 1/16" = 1' - 0"

TWO STORY, 2 OR 3-BEDROOM UNITS

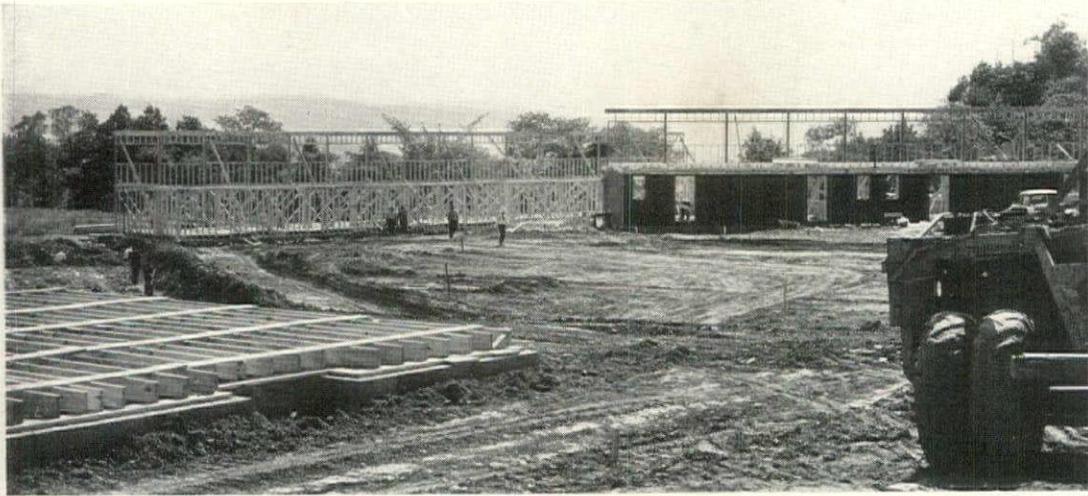
SECOND FLOOR



ONE STORY, 1-BEDROOM TWIN UNITS

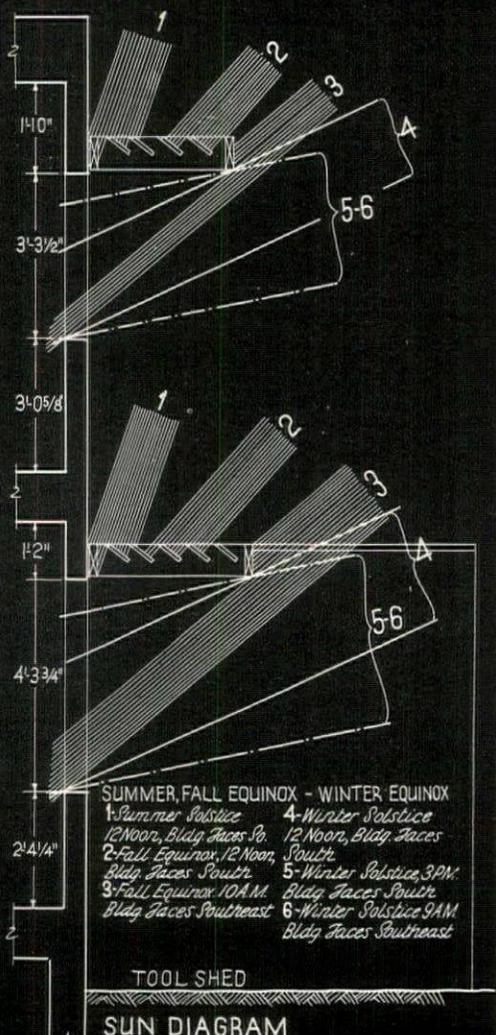
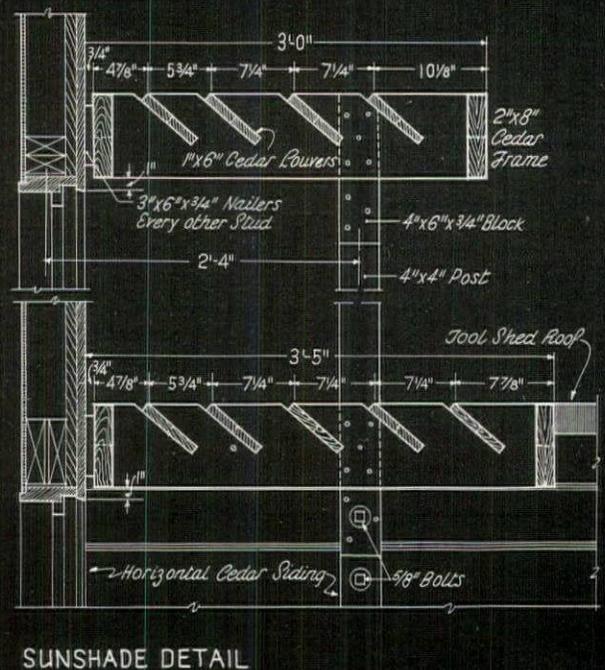
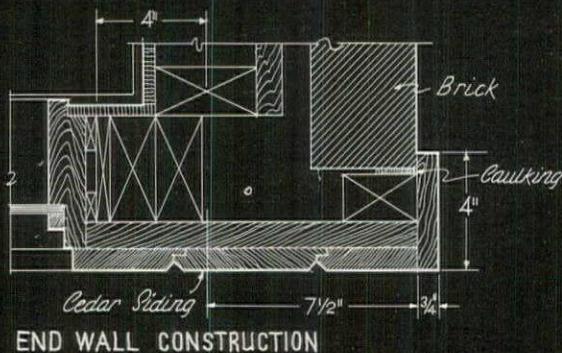
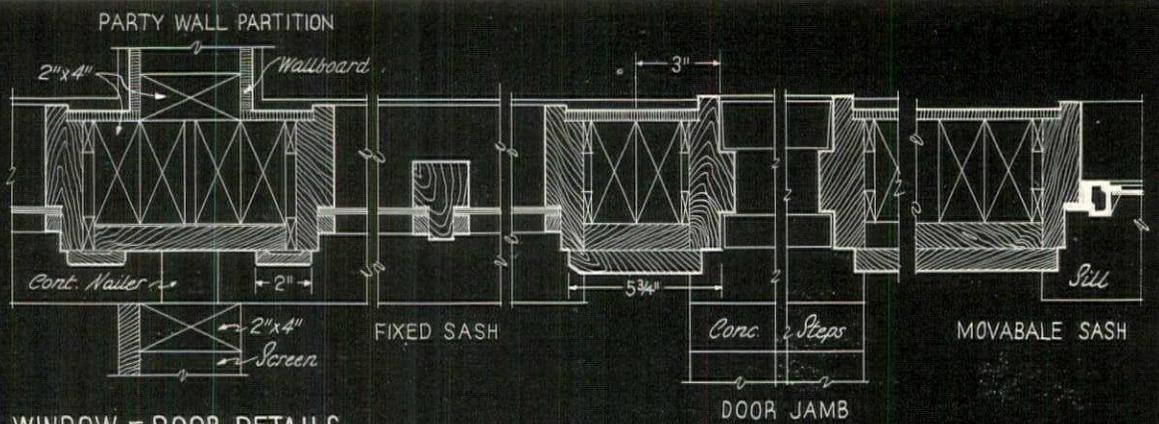
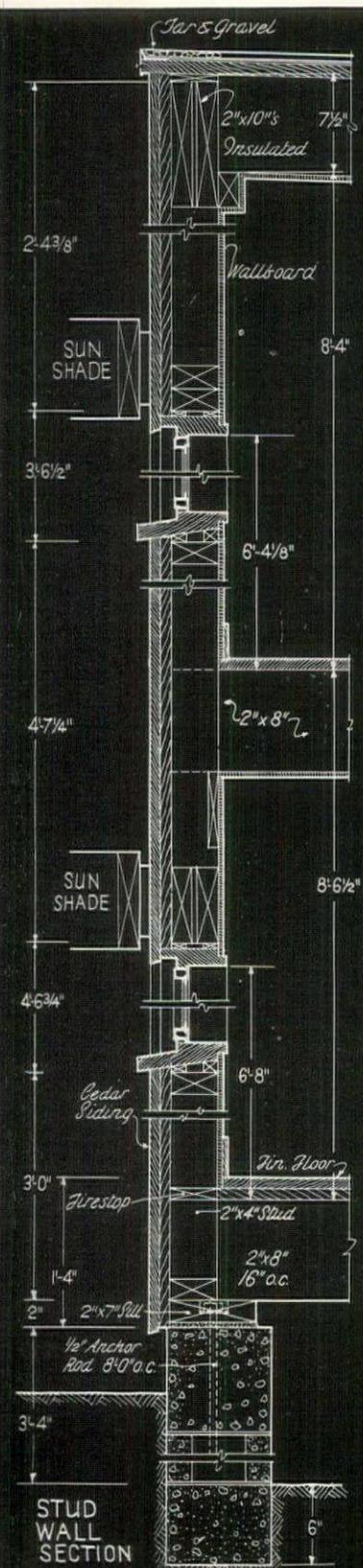


*Constructing agency: FWA Division of Defense Housing



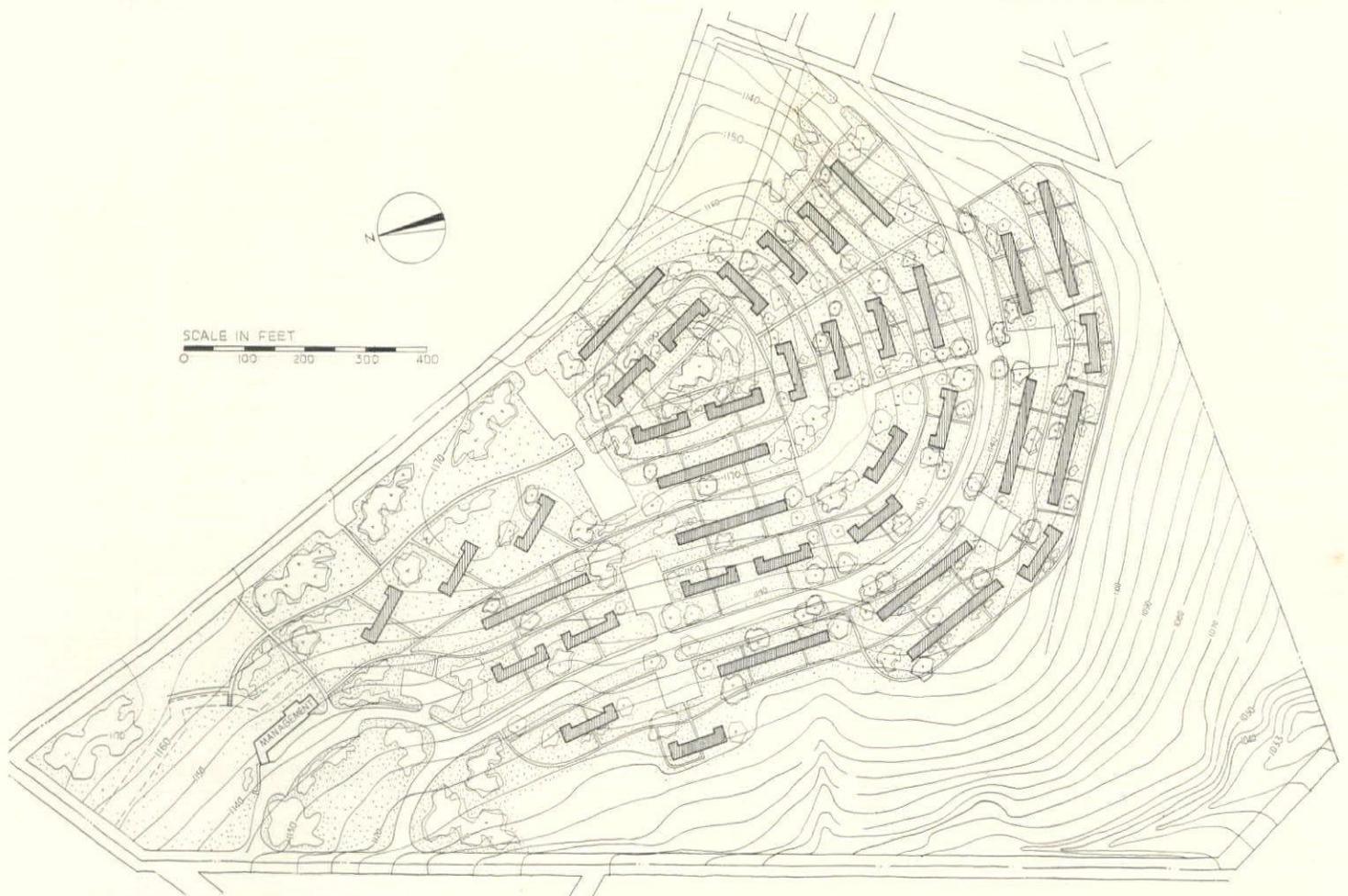
Luke Swank

CONSTRUCTION. An orderly plan has been related to a panel system of field fabrication in which the members are nailed together on the floor platform and then raised as a unit. When the stud panels are fastened together the end studs are doubled to form four-inch posts. This is clearly illustrated in the photograph at the left and in the structural details below. Brick is used as a veneer on some of the first-floor walls. Construction cost per unit averaged \$3.098.



SUMMER, FALL EQUINOX - WINTER EQUINOX
 1-Summer Solstice 12 Noon, Blg Faces So.
 2-Fall Equinox 12 Noon, Blg Faces South
 3-Fall Equinox 10 AM, Blg Faces South
 4-Winter Solstice 12 Noon, Blg Faces Southeast
 5-Winter Solstice 3 PM, Blg Faces South
 6-Winter Solstice 9 AM, Blg Faces Southeast

3 HOUSE TYPES, TWO STORY, ONE TO THREE BEDROOMS



DEFENSE HOUSING AT NORTH BRADDOCK, PA.*

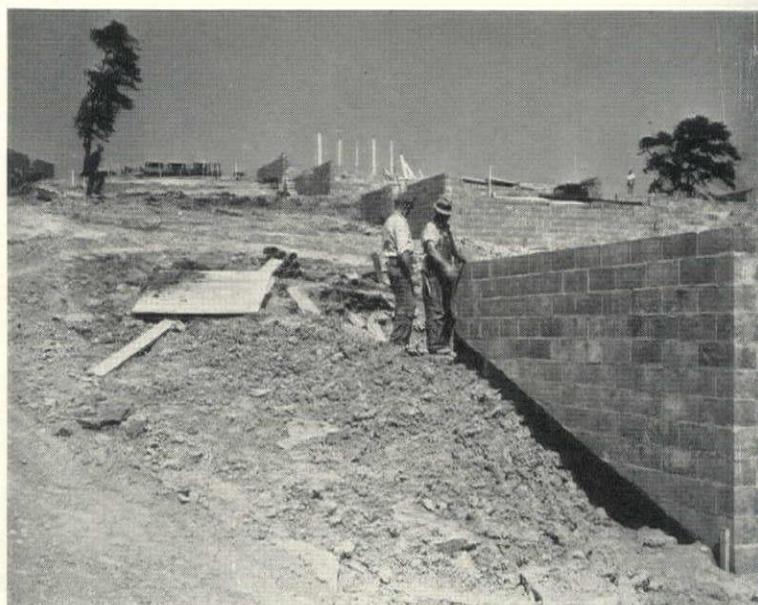
The row-type units of this 200-house project are arranged on the rounded end of a knoll, and face south, southwest, and west according to the direction of the slope. A single traffic street traverses the property in an easy curve, following the contours except at the ends, where it drops to the level of the adjoining roads. Parking areas at right angles to this street provide

vehicular access to the houses, which are ranged as many as four rows deep from the street. In general, the slope of the land is such that the grade at the back of the houses is almost a floor higher than that at the front, and the design takes advantage of this fact by the use of two-story, two-family houses entered from opposite sides.

JAMES A. MITCHELL & DAHLEN K. RITCHEY, ASSOCIATED ARCHITECTS

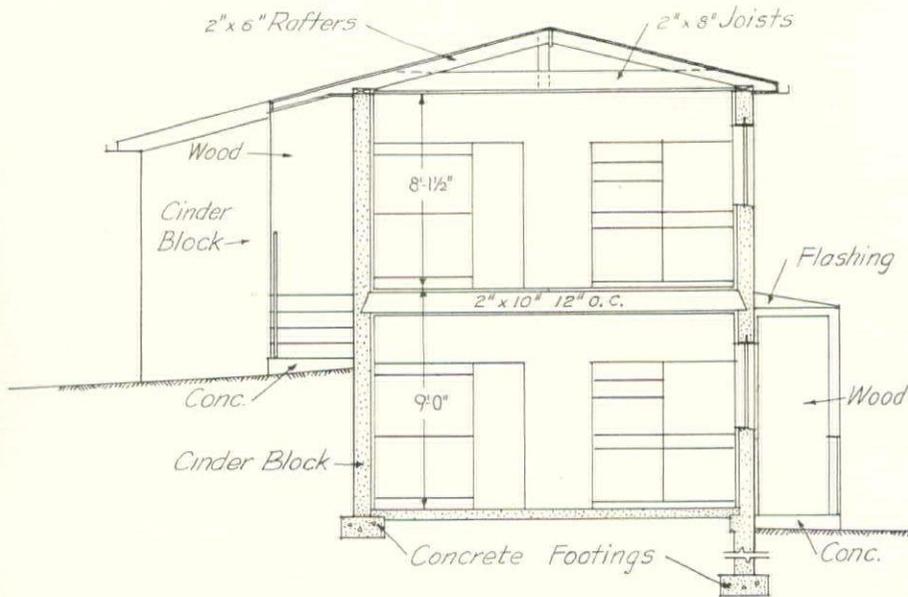


*Constructing agency: FWA Division of Defense Housing.

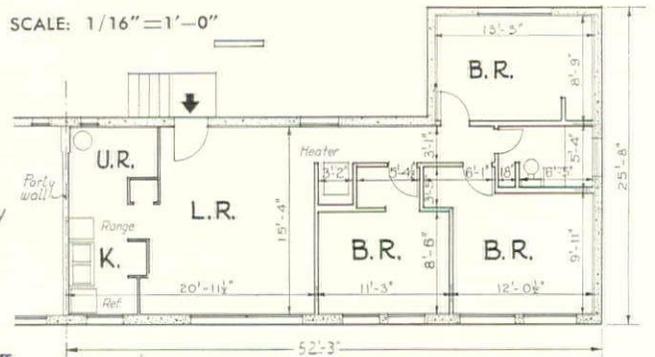


Luke Swank Photos

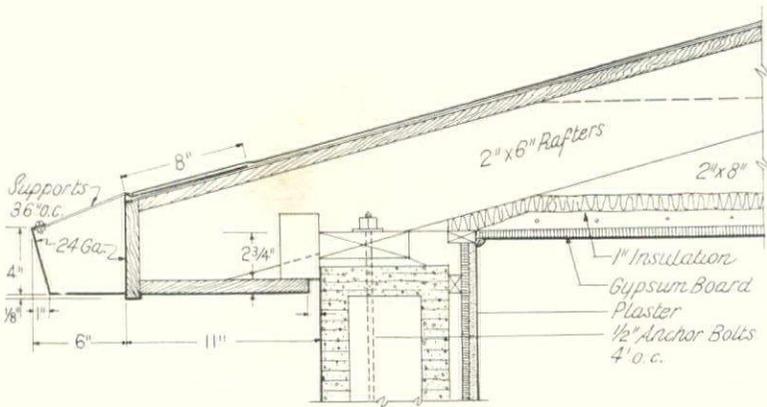
3 HOUSE TYPES, TWO STORY, ONE TO THREE BEDROOMS



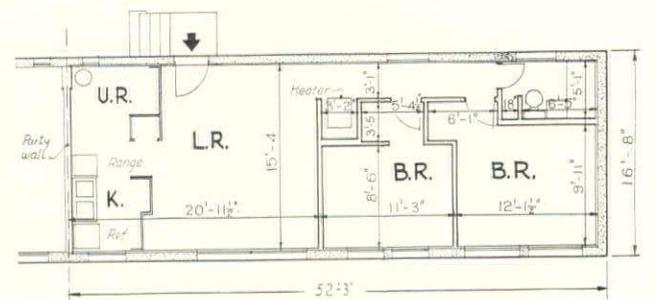
SCALE: 1/16" = 1'-0"



SECOND FLOOR — 3-BEDROOM UNIT

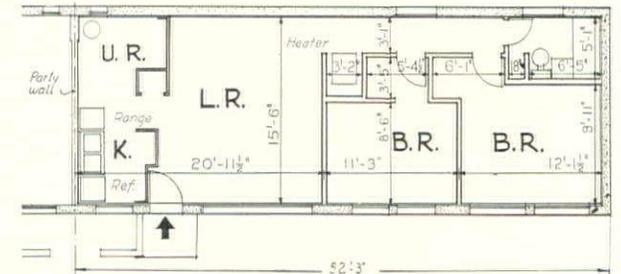
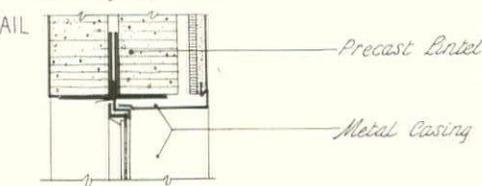


ROOF & GUTTER DETAIL



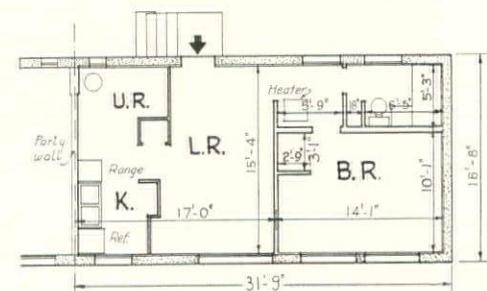
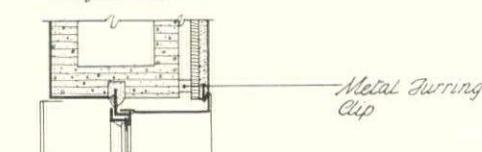
SECOND FLOOR

HEAD SECTION



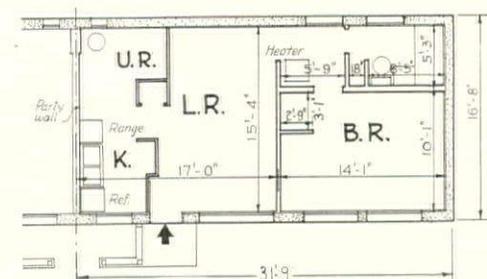
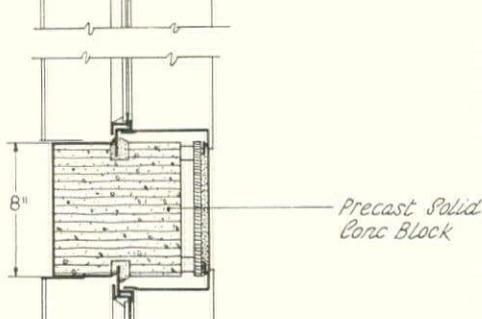
TWO STORY, 2-BEDROOM UNITS

JAMB SECTION



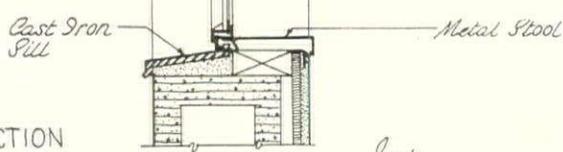
SECOND FLOOR

MULLION SECTION

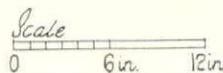


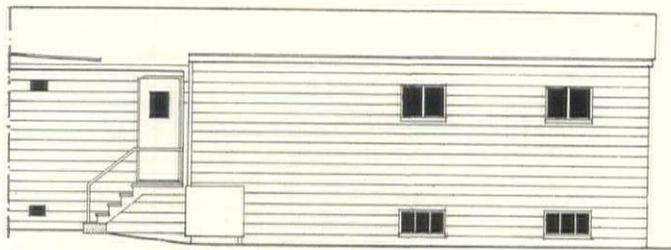
TWO STORY, 1-BEDROOM UNITS

SILL SECTION

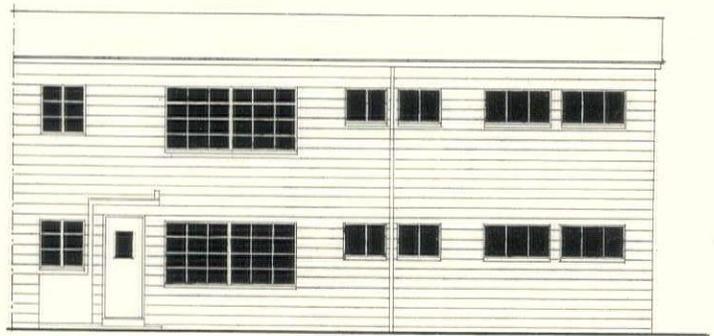


ROOF, WALL & WINDOW DETAILS

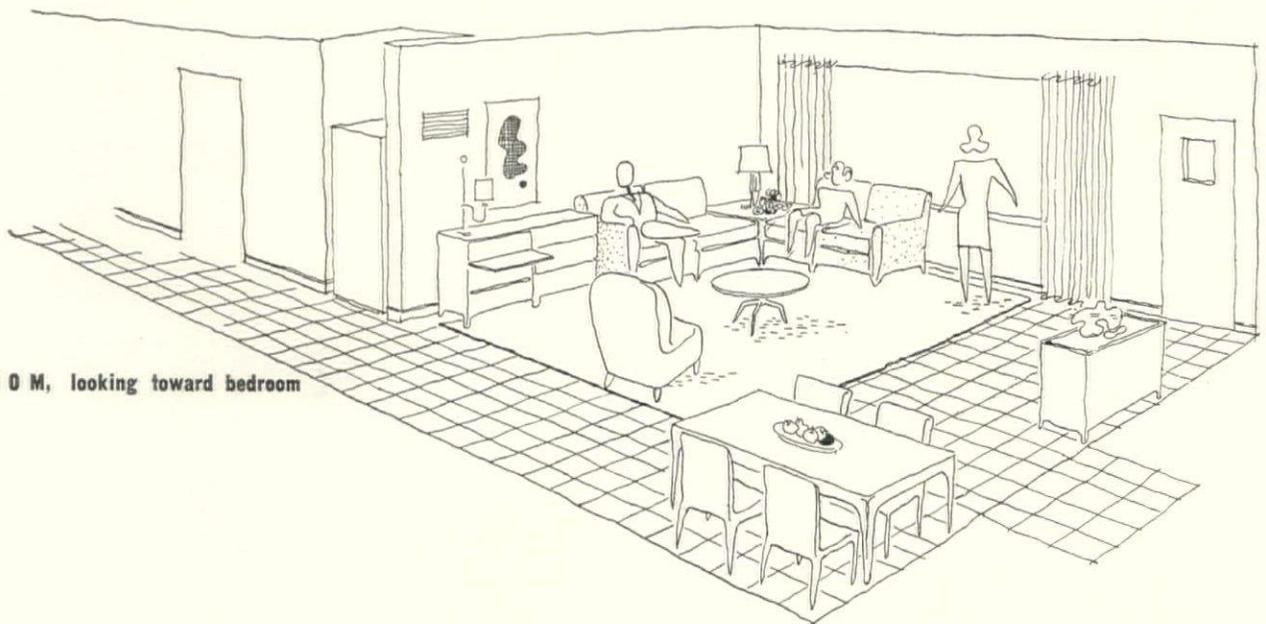
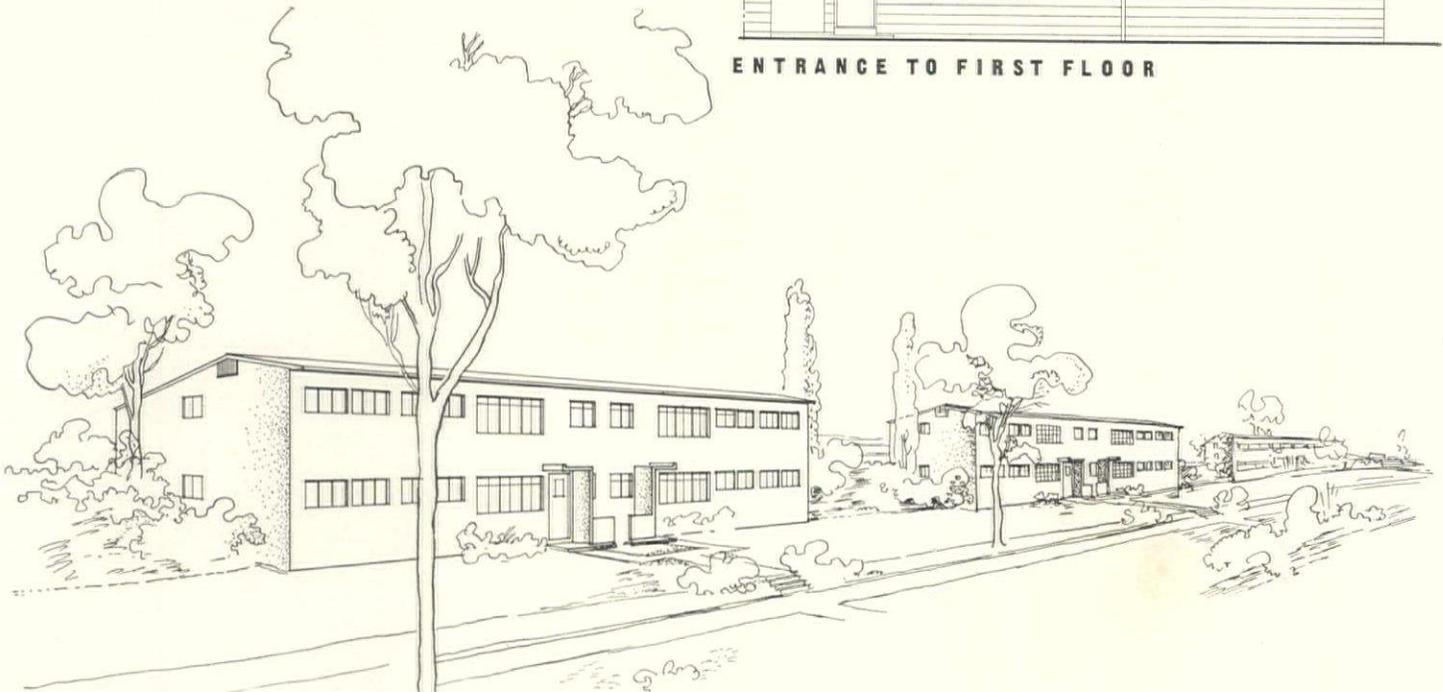




ENTRANCE TO SECOND FLOOR



ENTRANCE TO FIRST FLOOR



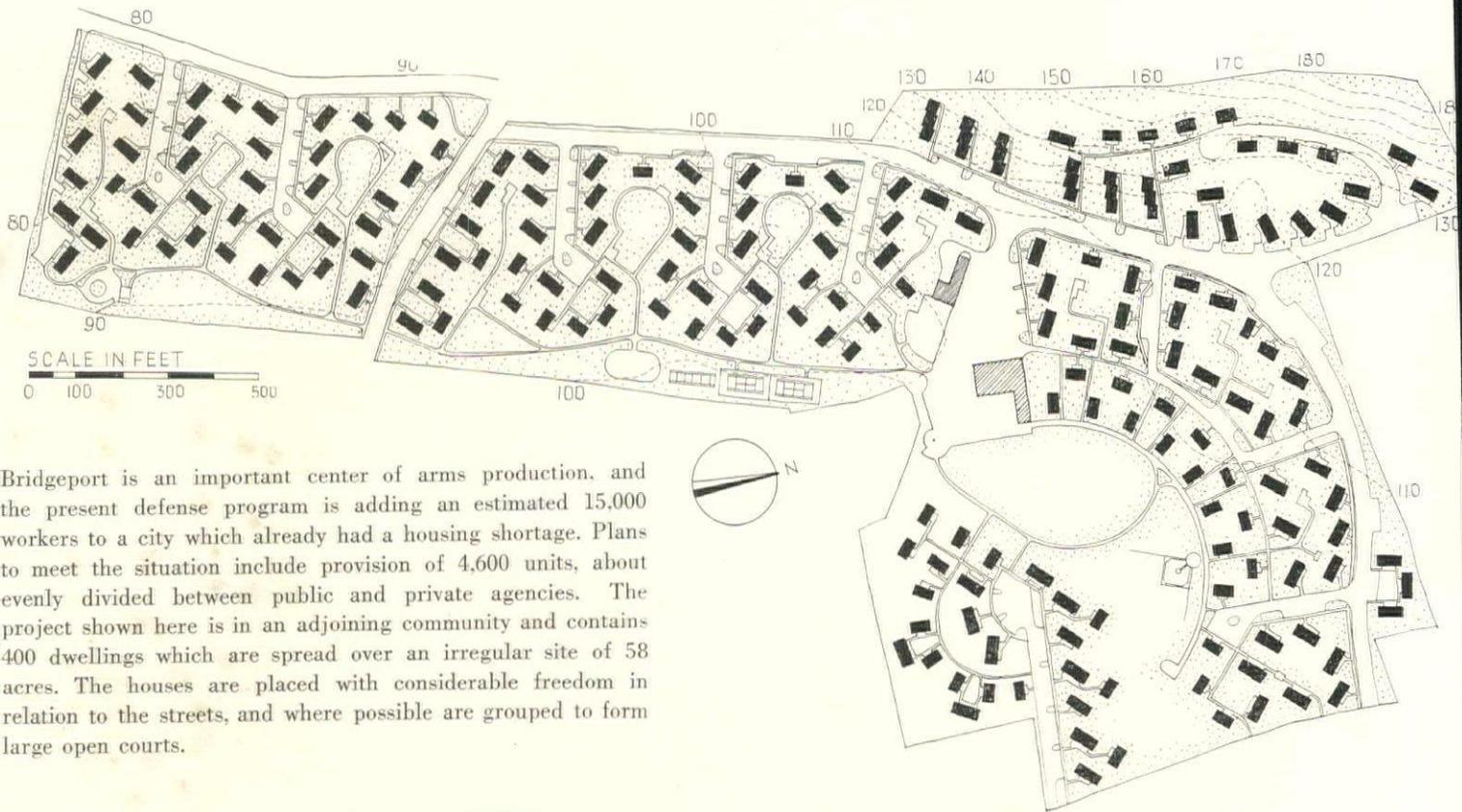
LIVING ROOM, looking toward bedroom

Units of one, two, and three bedrooms are provided, all on a single floor and with similar units above or below; entrance for the second-floor family being by a stoop from the high grade at the back. All of the plans are basically one room deep, an arrangement dictated in this instance by the fact that the first floor apartments

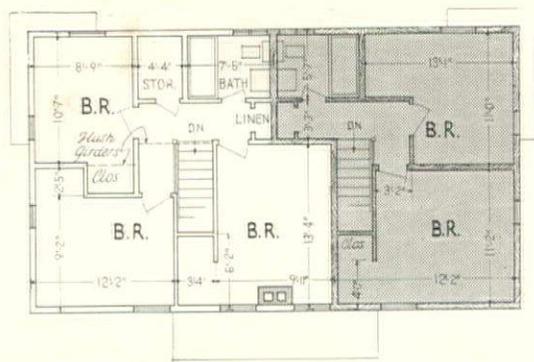
are partly below grade on one side. In all of the plans, the portion on both sides of the party wall, including the entrance, utility room, kitchen, and one side of the living room is identical. One- and two-bedroom units are arranged with the rooms in a line, with only the bathroom at the back, against the retaining wall. Three-

bedroom apartments are placed on the second floor, and are similar to the two-bedroom units below except for the additional bedroom, which is projected out over the high grade at the back and end of the building. Walls are cinder concrete blocks, floors wood and concrete, windows steel. Average cost per unit: \$3,312.

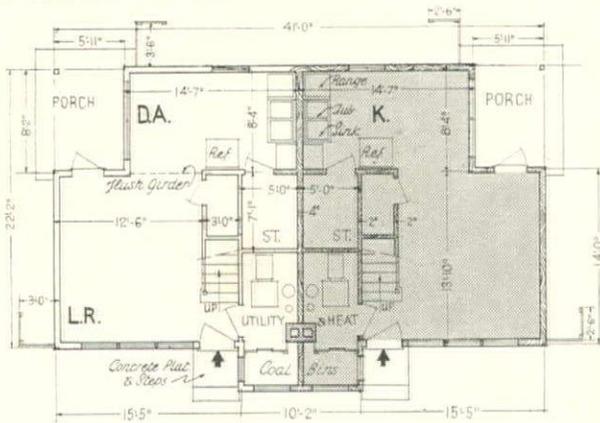
3 HOUSE TYPES, ONE & TWO STORY, ONE TO THREE BEDROOMS



Bridgeport is an important center of arms production, and the present defense program is adding an estimated 15,000 workers to a city which already had a housing shortage. Plans to meet the situation include provision of 4,600 units, about evenly divided between public and private agencies. The project shown here is in an adjoining community and contains 400 dwellings which are spread over an irregular site of 58 acres. The houses are placed with considerable freedom in relation to the streets, and where possible are grouped to form large open courts.



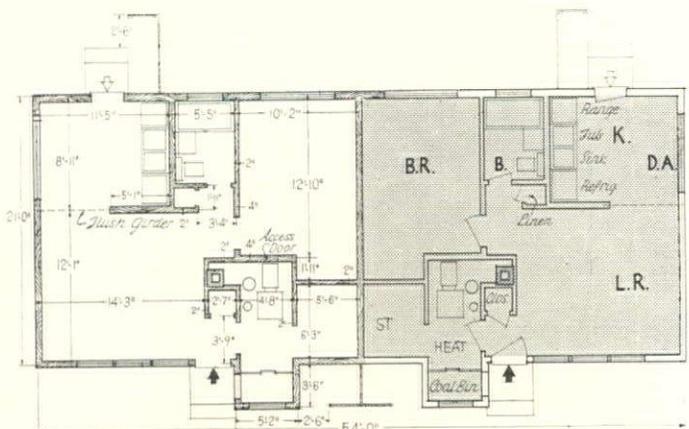
SECOND FLOOR



TWO STORY, 2 AND 3-BEDROOM UNITS



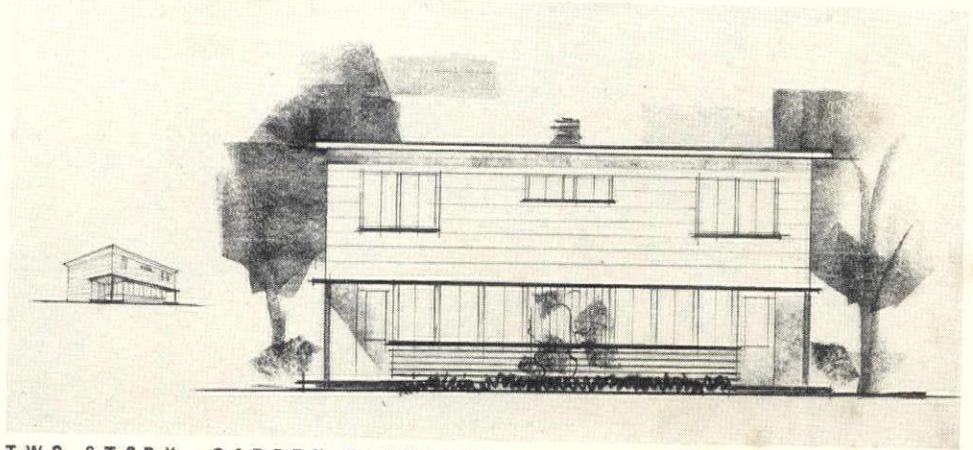
SCALE: 1/16" = 1' - 0"



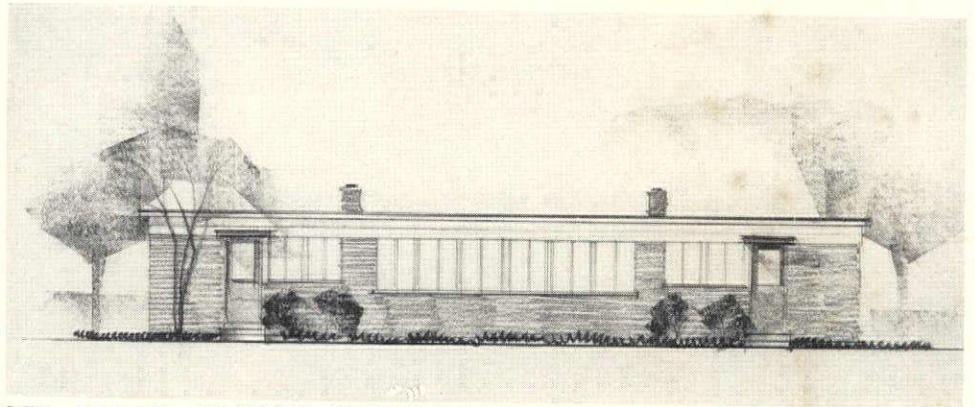
ONE STORY, 1-BEDROOM UNITS

UNIT PLANS. There are 58 houses with one bedroom, 242 with two, and 100 with three in both one- and two-story schemes. In general the plans show how much has been learned about small house room arrangement in the past few years; they are compact, efficient and economical. Of outstanding interest is the provision of storage and utility rooms on the main floor. Exteriors are clean and direct, with good fenestration.

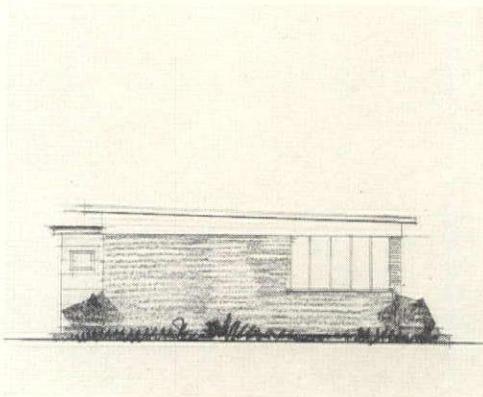
COST. The average cost per house (excluding land, utilities, grading, stove and icebox) was \$3,054. It should be noted that contributing items to this total include interior plaster finish and the use of brick for about half of all exterior walls.



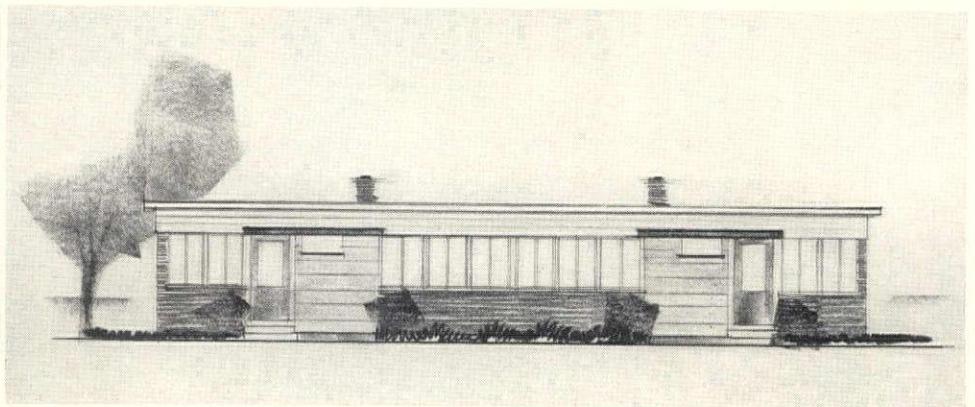
TWO STORY—GARDEN ELEVATION



ONE STORY—GARDEN ELEVATION

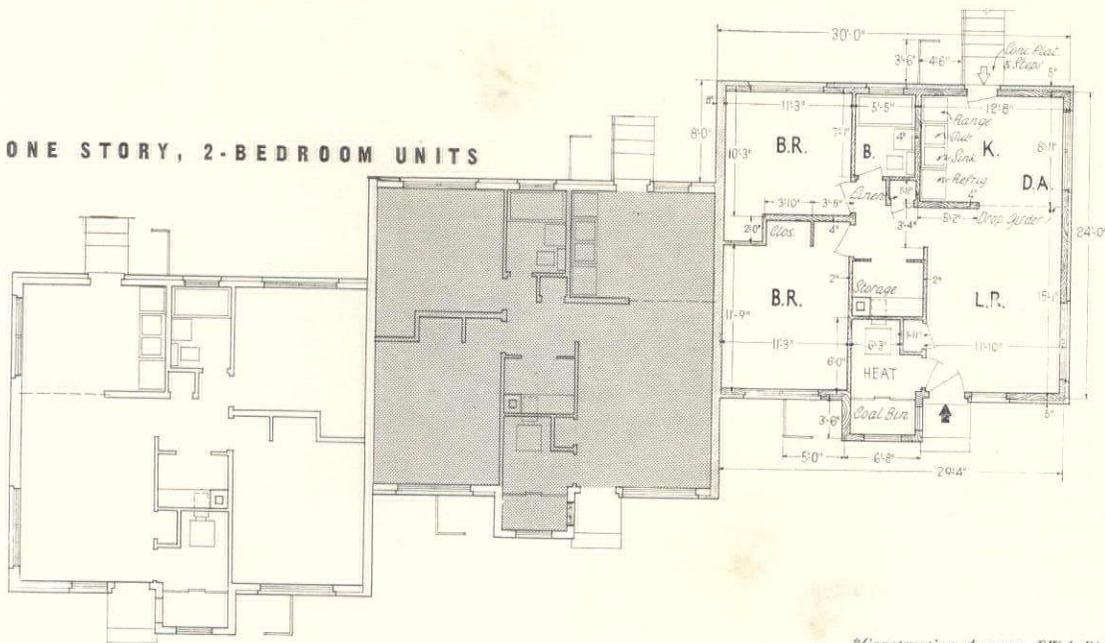


SIDE ELEVATION



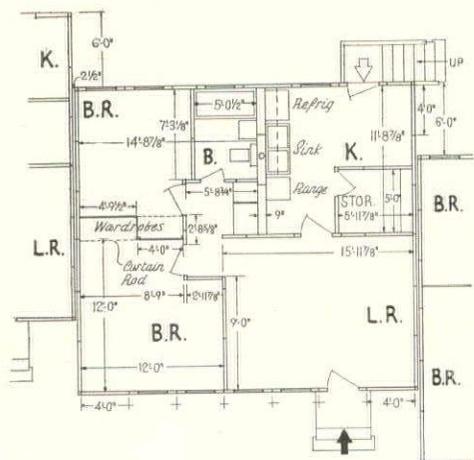
STREET ELEVATION

ONE STORY, 2-BEDROOM UNITS

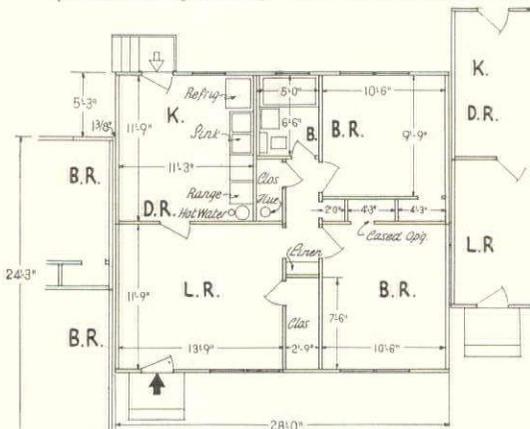


*Constructing Agency: FWA Division of Defense Housing

2 HOUSE TYPES, ONE STORY, TWO BEDROOMS

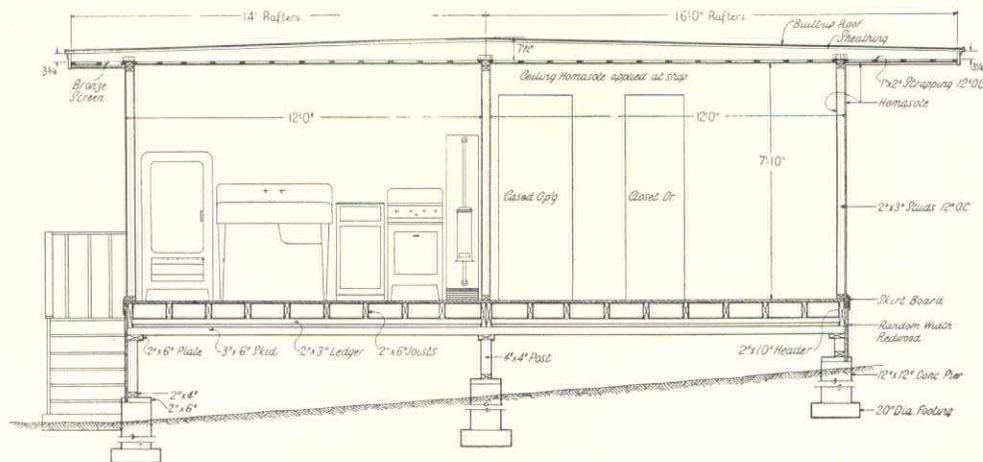


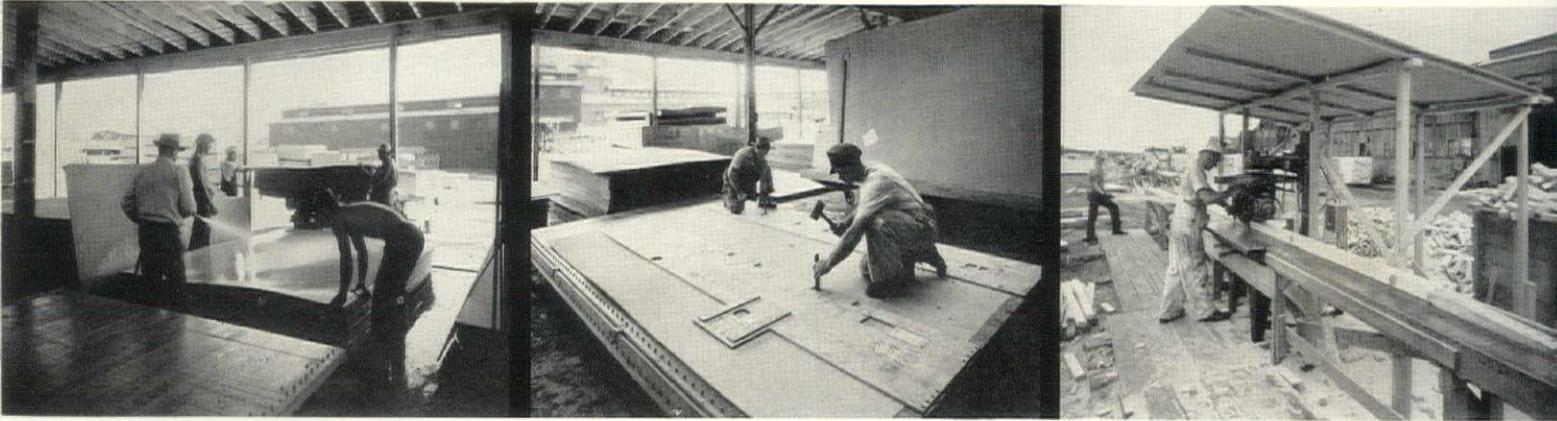
PLYWOOD HOUSE, construction cost \$2,731
(Structural system by Plywood Structures, Inc.)



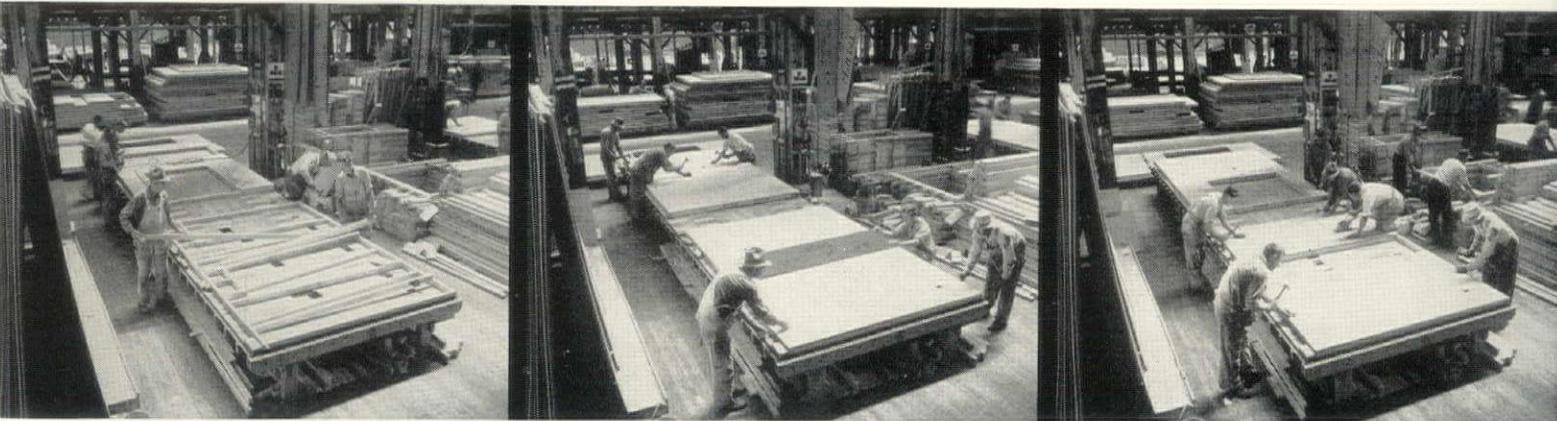
HOMASOTE HOUSE, construction cost \$2,736
(Homasote Precision-Built System)

Defense activity in the vicinity of California's Mare Island Navy Yard is adding an estimated 20,000 new workers and creating an unprecedented demand for houses. FSA has provided 726 temporary dormitory units, the Navy has built 600 permanent houses, PBA is building another 1,400, and private industry is expected to furnish 1,800 more. The houses shown on this page are part of a supplementary, 1,692 house development of almost identical, demountable houses built by FWA. In order to increase the salvage value of the houses, which may not be needed after the war, each of the units is complete in itself, with party walls between attached houses doubled. Rows of houses are set on light post foundations enclosed in rough redwood boards, which step up and down over the rolling site and require little grading. Manufacture and erection of the Homasote houses (977 units) is described on the two following pages.

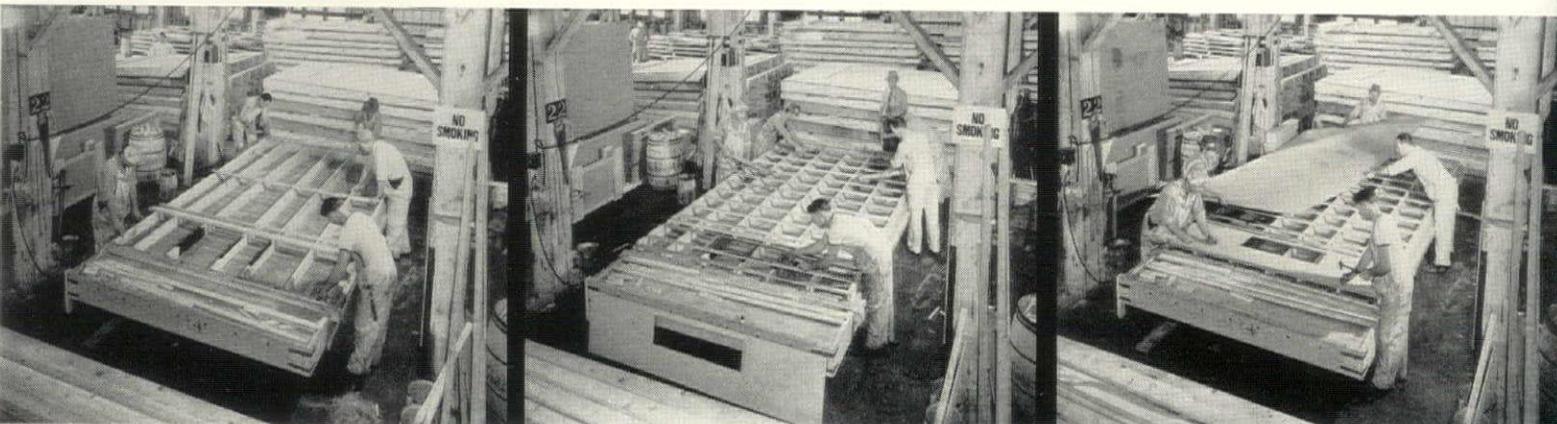




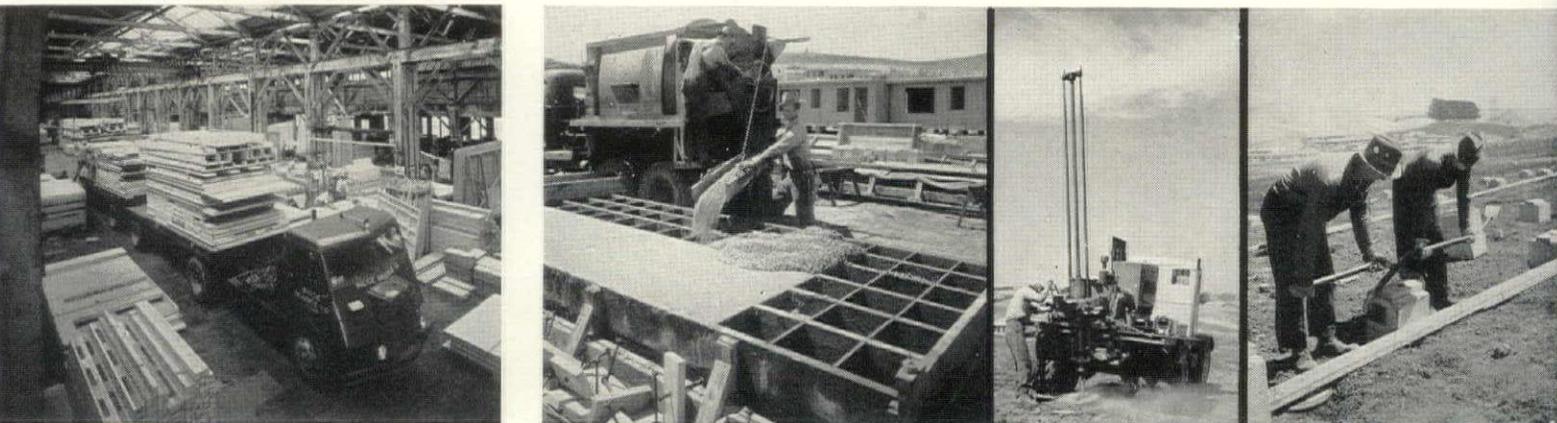
Picture 1 shows Homasote sheets being wet down before use, in order to swell sheets so that subsequent shrinkage will stretch material on frames. 2 shows precutting of openings for electric outlet boxes, 3 precutting of studs and other framing lumber outside the plant.



4, 5, and 6, show assembly of a typical, room size wall panel on a "jig table" marked off in modular units. Door opening is cut after the sheet is applied, using plywood template and skill saw; sheets are glued and nailed to 2 x 3 studs, using mechanical glue spreaders.



7, 8, and 9 show fabrication of a roof panel, complete with overhang and screened vent. Homasote ceilings are applied to furring strips on the bottom of the rafters, tops of rafters canted to receive sloping roof at job. Four such panels, plus seven smaller units, roof one house.

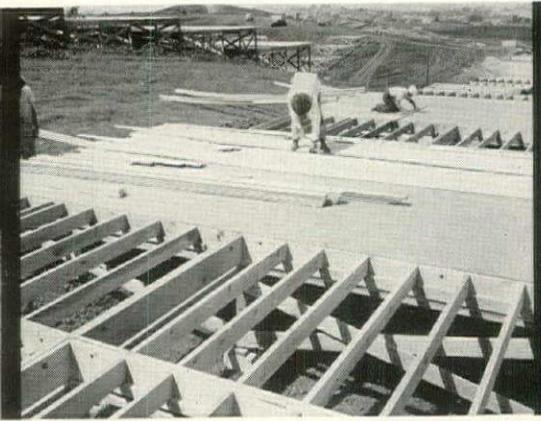


10. Trailer-truck loaded with three complete houses ready for 29 mile trip to the site. **SITE PREPARATION.** Picture 11 shows form for casting foundation piers in batches of 84 piers. 12 shows hole-boring apparatus for drilling foundation holes, and operation of setting piers.

*Constructing Agency: FWA Division of Defense Housing



13.

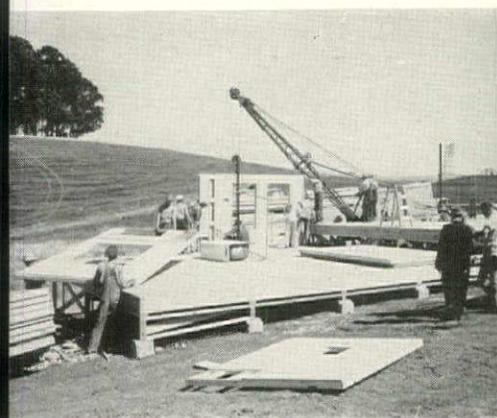


14.

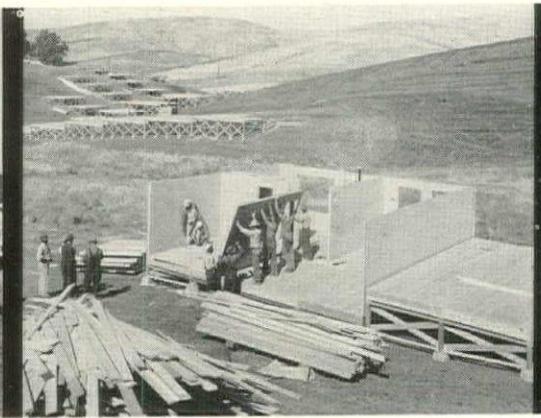


15.

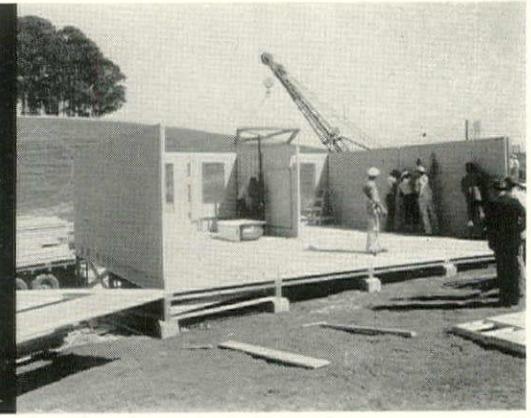
Pictures 13 and 14 show site-assembly (on a special jig table) of floor framing panels and erection on post foundations. Single thickness flooring is laid in the conventional way. Picture 15 shows traveling crane unloading wall panels from trailer truck.



16.

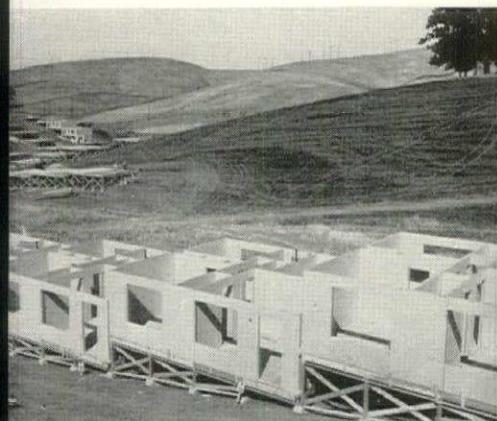


17.



18.

16, 17, and 18 show successive stages in the erection of wall panels on the floor platform. Assembly is handled in two stages, with a fifteen minute intermission (during which the crew shifts to the next house in the row) for the installation of prefabricated plumbing.



19.



20.



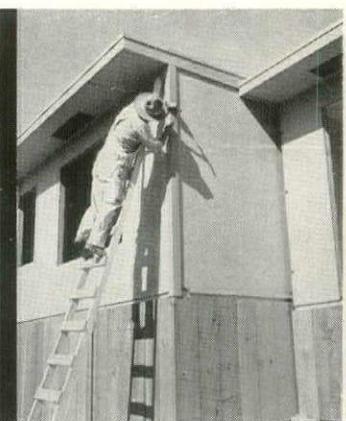
21.

19 shows completed walls, ready to receive roof panels, which are lifted into place by a light traveling crane (20 and 21), covered with roofers in the conventional way, and surfaced with roll roofing (22). 23 shows application of trim, the larger picture below completed houses.

Gabriel Moulin



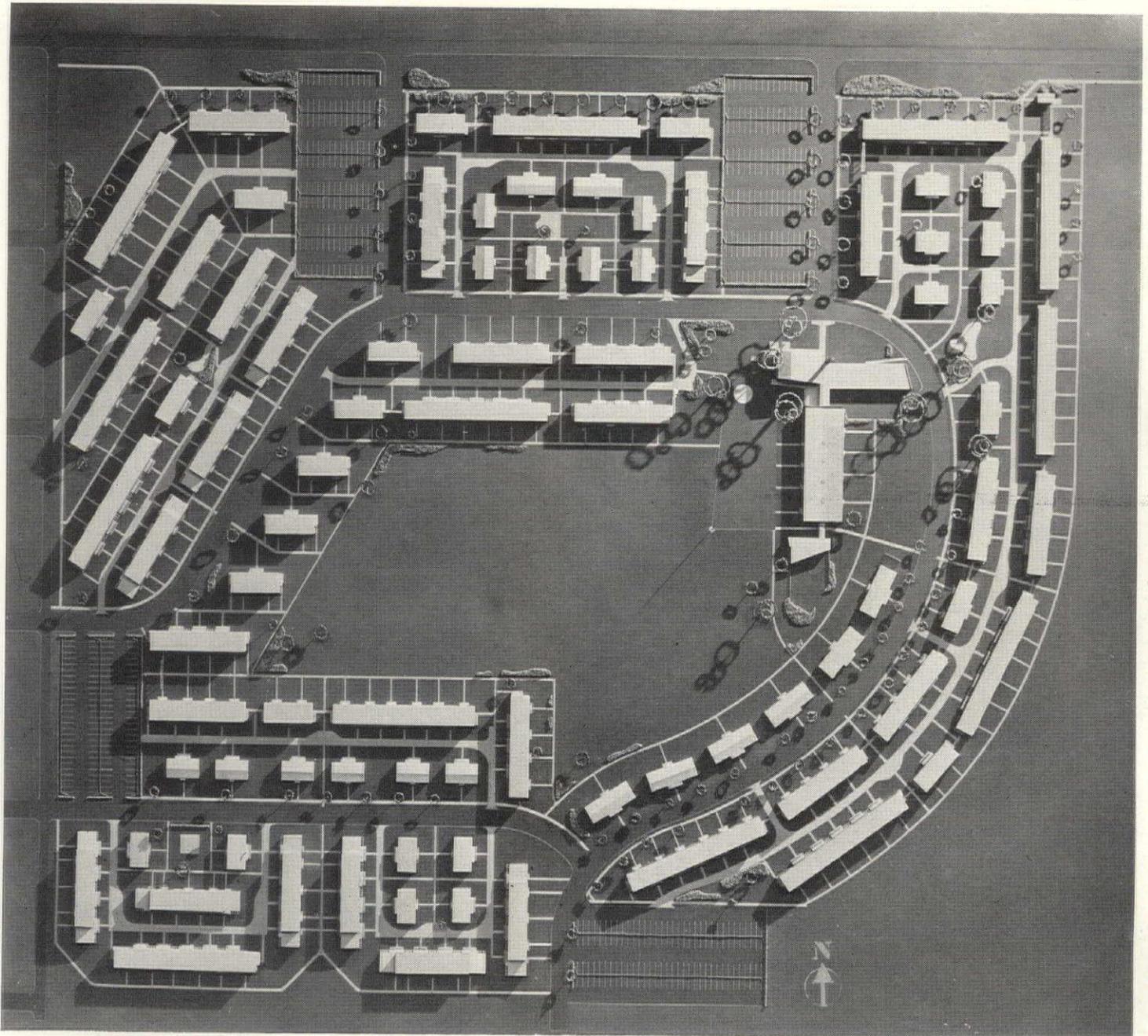
22.



23.



5 HOUSE TYPES, ONE & TWO STORY, ONE TO THREE BEDROOMS



DEFENSE HOUSES AT CENTER LINE, MICH.*

ELIEL & EERO SAARINEN, ARCHITECTS

J. ROBERT F. SWANSON, ASSOCIATE

Private enterprise is expected to provide 10,000 houses in the Detroit area to house workers newly employed in tank, truck, and airplane body plants. To relieve immediate pressure, the government is supplying 1,000 new homes, 300 to the south of the city and 700—of which these 477 houses are the major part—to the north. Since local schools are already overcrowded, a new elementary school has been included as part of the project, sharing community and playground facilities with the occupants of the houses.

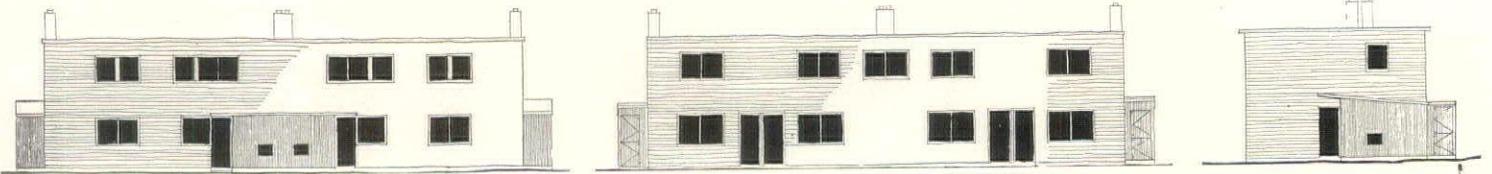
The plot is commendable for its orderly use of large and small units and for the variety of pattern that is achieved. A single traffic street, in the form of an elliptical loop, encloses the large central block containing the school, park, and play areas, while the periphery is divided into four distinct sections

by short connecting streets and adjoining parking areas for tenants' cars. In each of these areas, houses are ranked in two or more rows back from the traffic street, and are serviced on one side by a communicating driveway and on the other by walks. Orientation of the units is generally south and west, with south predominating.

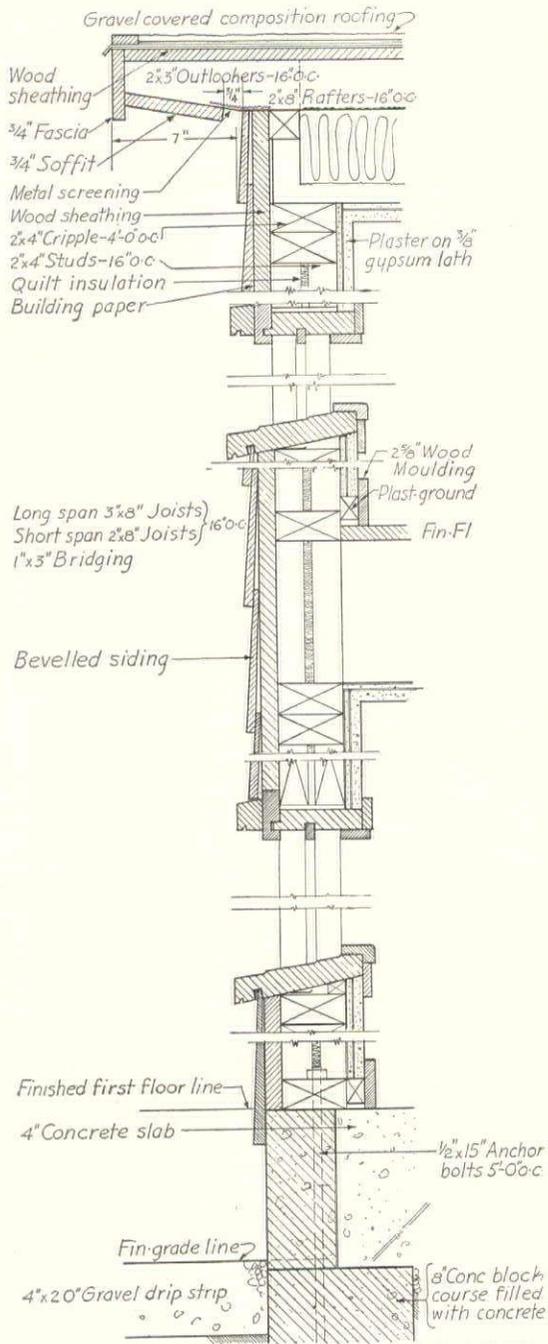
Houses are frame construction, one and two stories high, and are combined in rows of 2 to 8 families. Heating will be by individually coal-fired warm air units, roofs both flat and pitched. In general, the service, or kitchen side of each house faces the communicating driveway, while formal entrance is by way of the walk system. Average construction cost per unit is \$3,075. Unit plans, elevations, details, and another photograph of the model are on the following two pages.

*Constructing Agency: United States Housing Authority

5 HOUSE TYPES, ONE & TWO STORY, ONE TO THREE BEDROOMS



ELEVATIONS TYPE A.



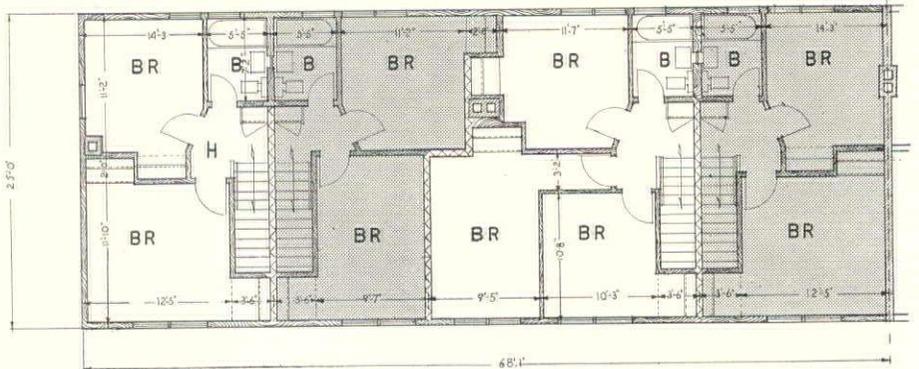
WALL SECTION-2 STORY UNIT

Scale in inches
0 2 4 6

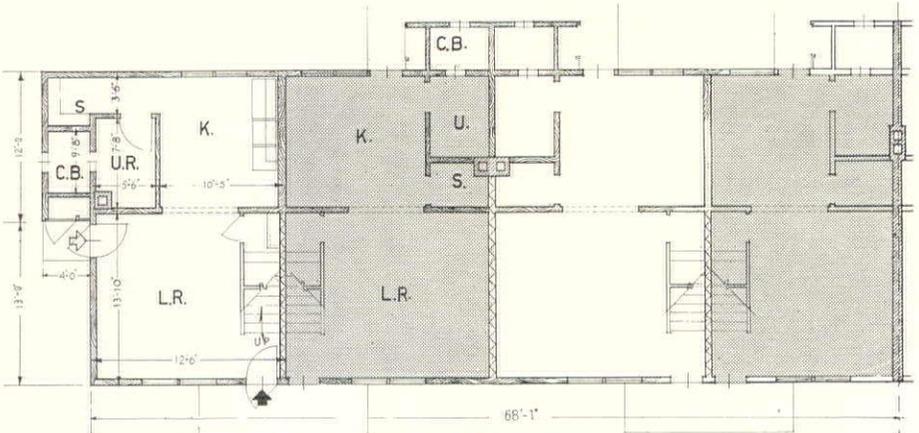
TYPE A. EIGHT FAMILY, two story house (one half plan). Two houses in each row have extra, "staggered" bedrooms extending part way over the first floor of the adjoining house, plan of end unit slightly varied for side entrance.

TYPE B. TWO FAMILY, one story single bedroom plan. Note coal bin, utility room and storage closet, necessary features in basement-less houses of this type.

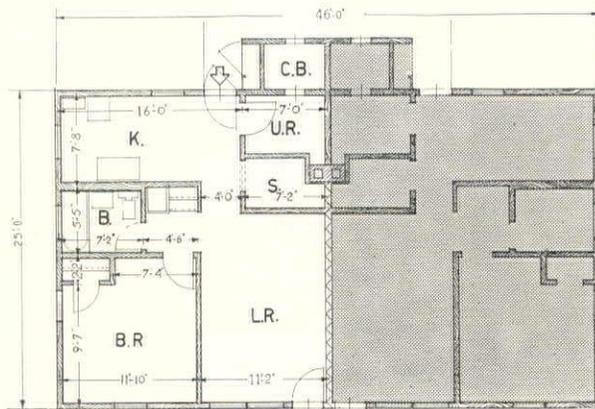
TYPE C. TWO FAMILY, one story, three bedroom house. Core of plan, near party wall, is identical with that of the one-bedroom unit.



TYPE A. SECOND FLOOR

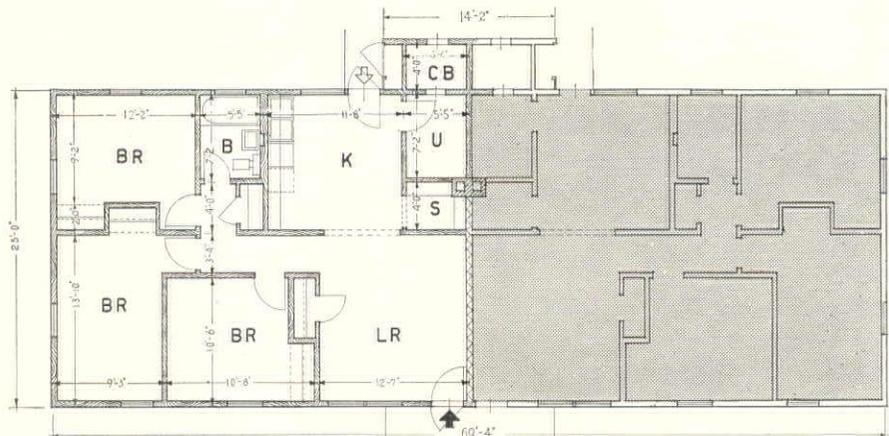


TYPE A. TWO STORY UNITS



TYPE B. ONE STORY UNITS

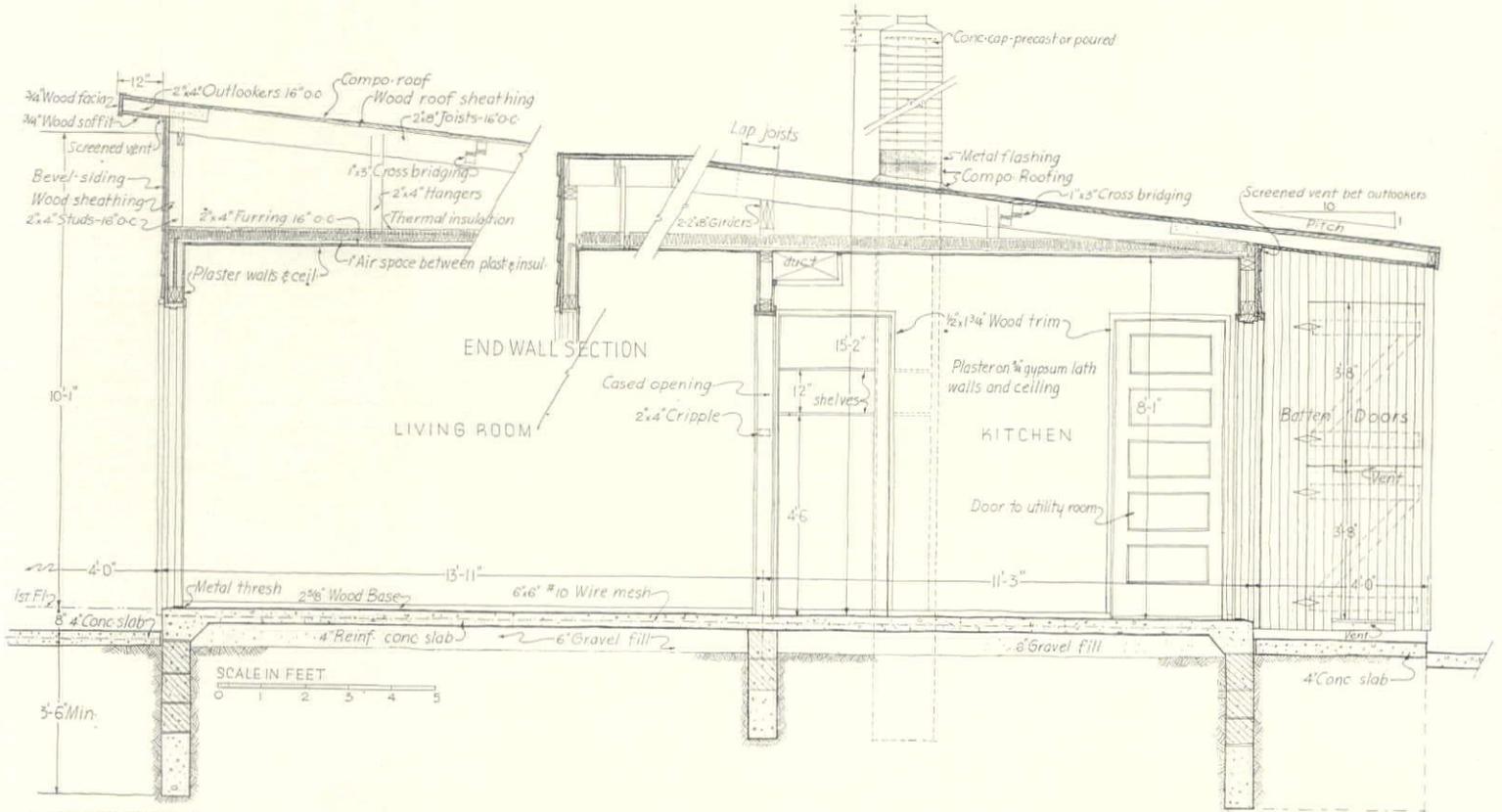
SCALE: 1/16" = 1' - 0"



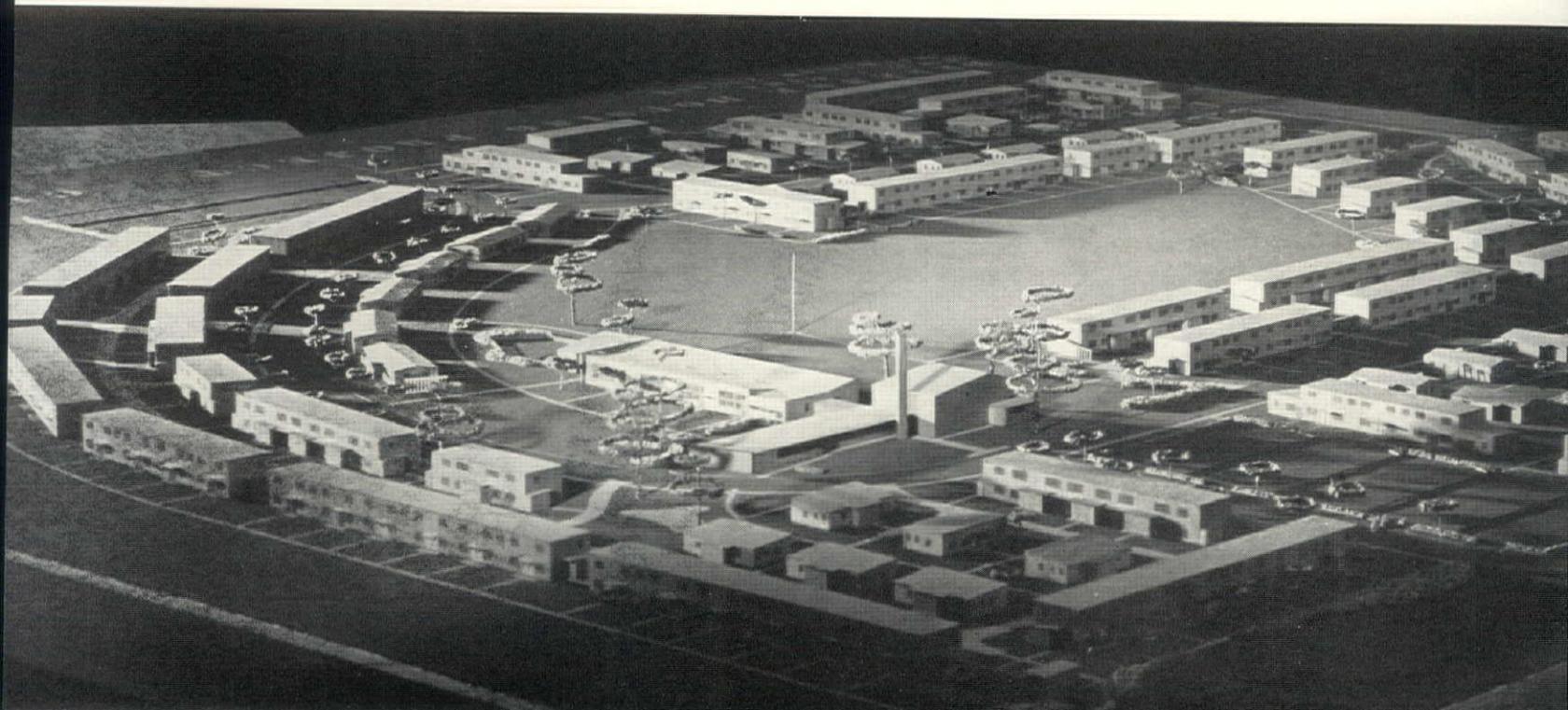
TYPE C. ONE STORY UNITS



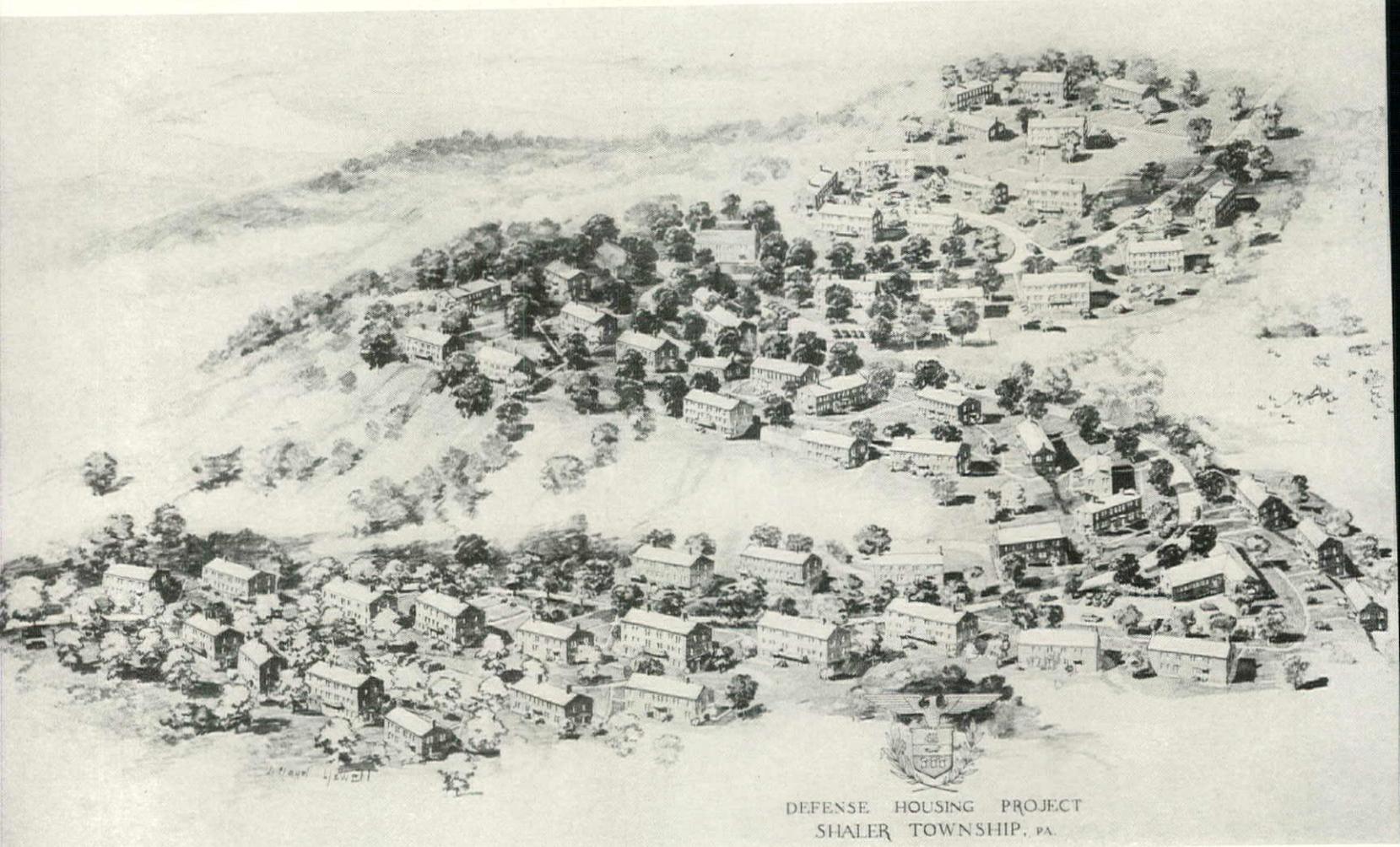
ELEVATIONS TYPE B.



SECTION TYPE B.



7 HOUSE TYPES, 1, 1½, 2, & 2½ STORIES, ONE TO FIVE BEDROOMS

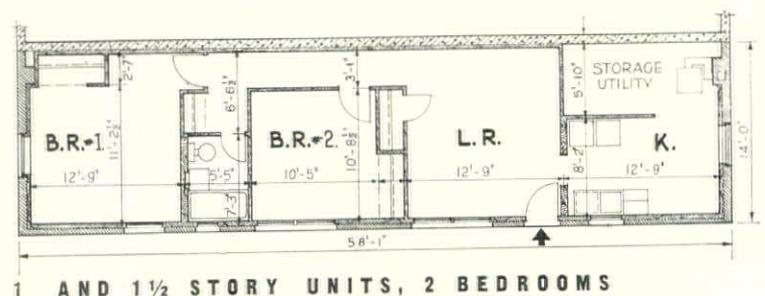
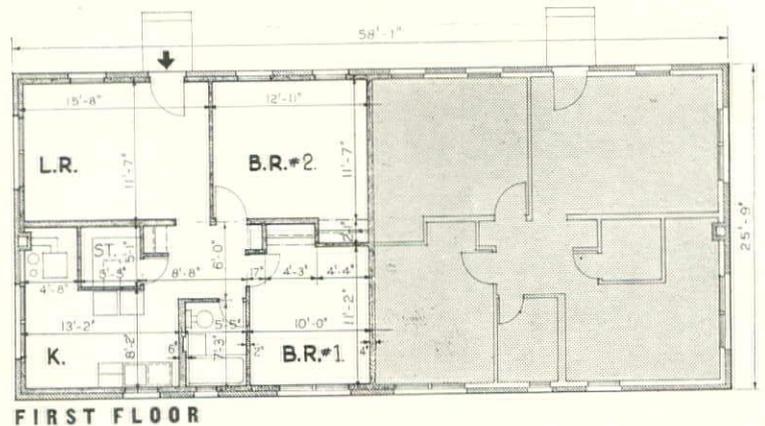


DEFENSE HOUSING PROJECT
SHALER TOWNSHIP, PA.

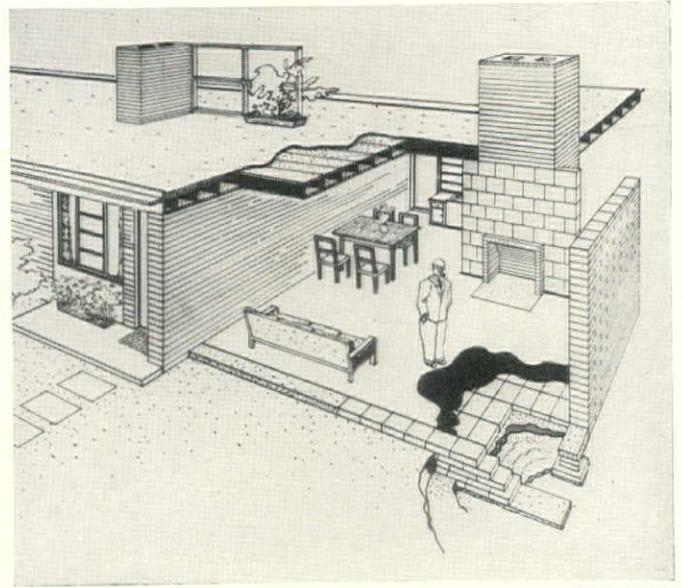
These 251 houses are part of the Pittsburgh area's 5,000-house, government-sponsored program which is expected to be supplemented by twice that number of units built by private enterprise. Like that of the New Kensington project, the site is rugged and irregular, and dictated an informal site plan in which the houses are grouped along a serpentine roadway. Because of the steep gradient, the row-type units have been kept short, and most of the plans provide for an additional half-floor on the low side of the building, usually used for one or two separate apartments. Units are 1, 1½, 2, and 2½ stories high, and provide one to five bedrooms per family. Construction is brick veneer with frame floors and partitions, houses are basementless. Average construction cost per unit, \$3,283.

1 & 1½ STORY UNITS. This plan provides a two-family or twin house with two bedrooms per family when used on a level site, and room for another two-bedroom unit below where the grade permits. In the latter case, the space behind the retaining wall in the lower unit is excavated to the full depth of the wall for a short distance, in order to prevent chilling of the wall and consequent condensation. Individual heaters are provided for each family.

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



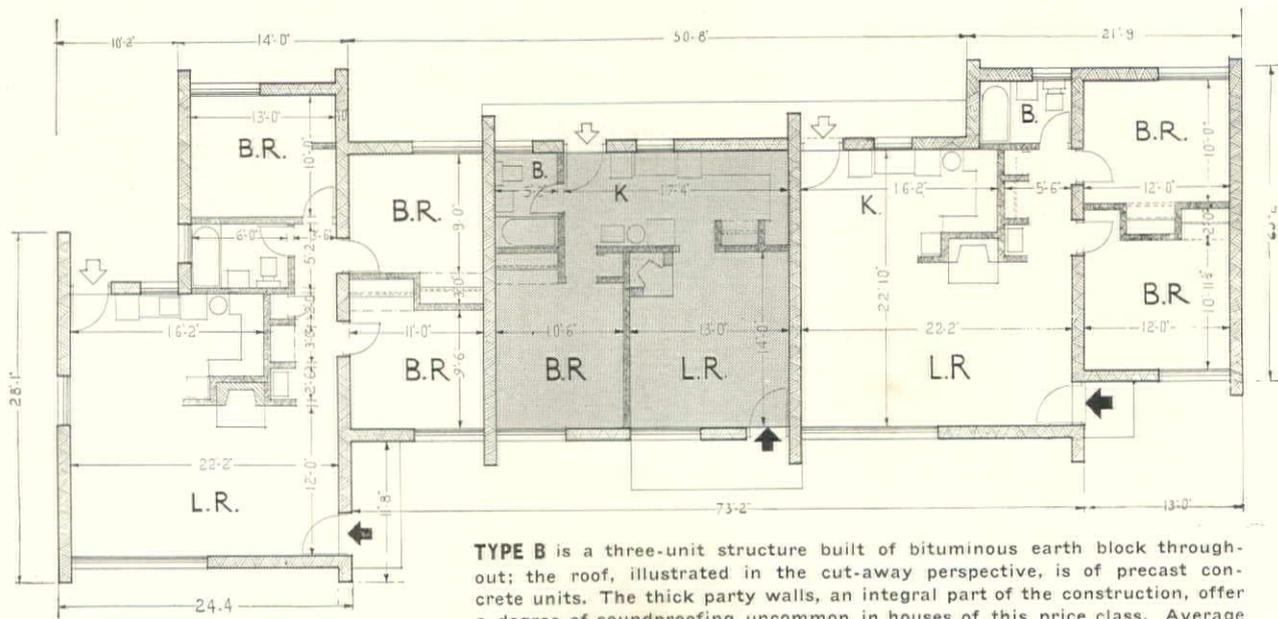
10 HOUSE TYPES, ONE & TWO STORY, ONE TO THREE BEDROOMS



TYPE B.

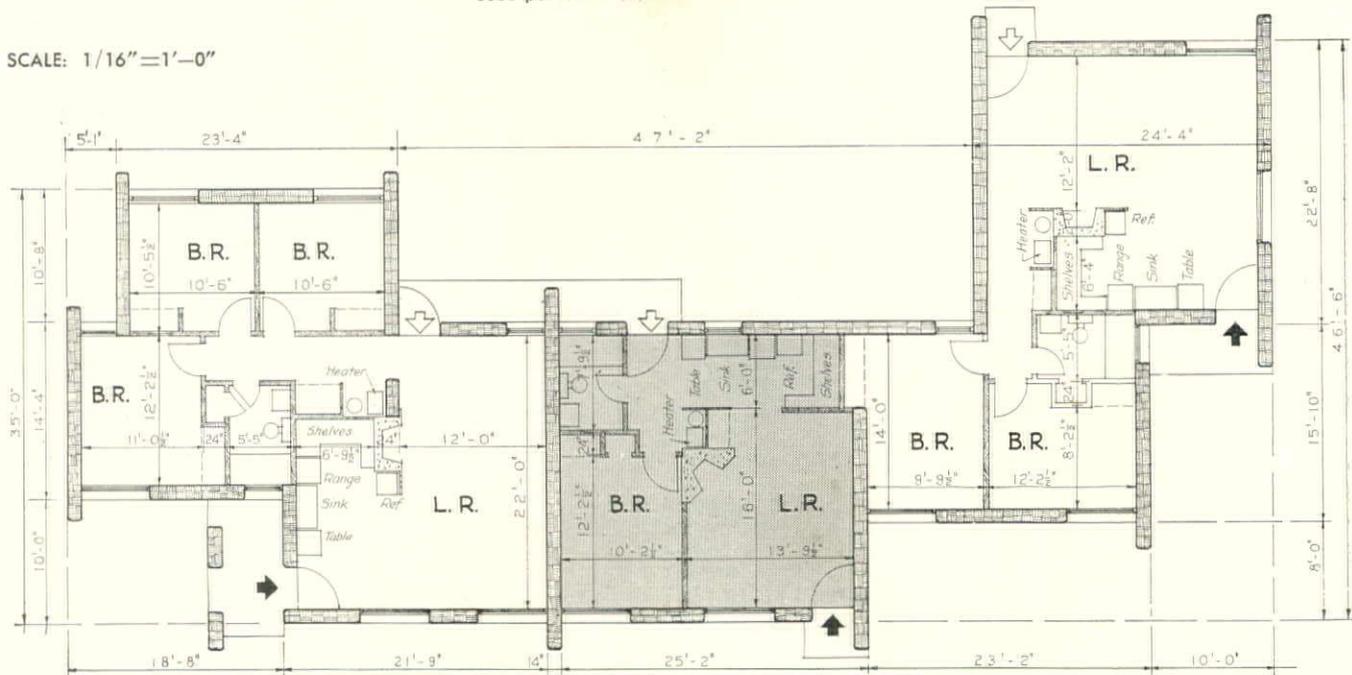
— STRUCTURE

FWA Photos

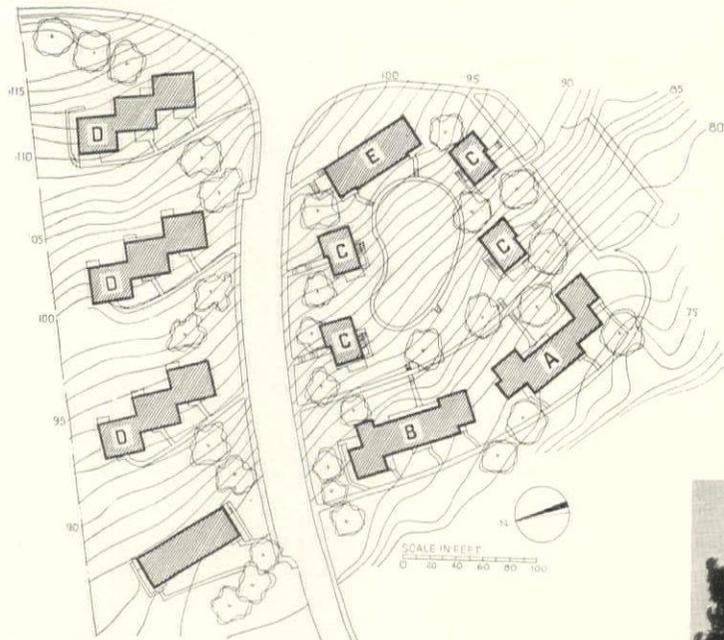


TYPE B is a three-unit structure built of bituminous earth block throughout; the roof, illustrated in the cut-away perspective, is of precast concrete units. The thick party walls, an integral part of the construction, offer a degree of soundproofing uncommon in houses of this price class. Average cost per unit: \$2,850.

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



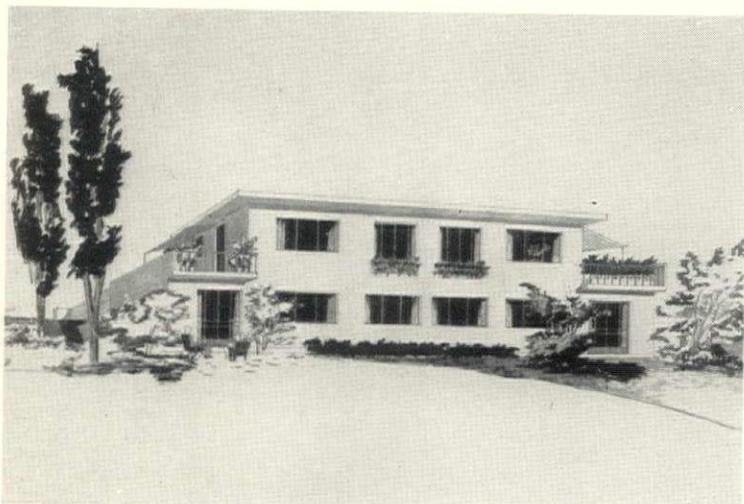
TYPE A provides the same accommodations as the unit above, and at the same cost, but uses cement-stabilized tamped earth walls instead of block. This structural method, a comparatively recent development, is reputed to have many advantages over the traditional rammed earth. Certain plan features are worth noting, especially the placing of the heater off the inside hall, and the use of fireplaces partly to screen activities in the kitchen. Average cost per unit: \$2,850.



The houses shown on these two pages were commissioned as "experimental" units and were used as a full-scale test for a number of building systems feasible within the economic limitations of the Lanham Act. In addition to using a variety of masonry constructions, the architects in a number of instances modified the current plan types for low-cost dwellings. Many of these changes, as noted in the brief descriptions, have added substantially to the livability of the houses.

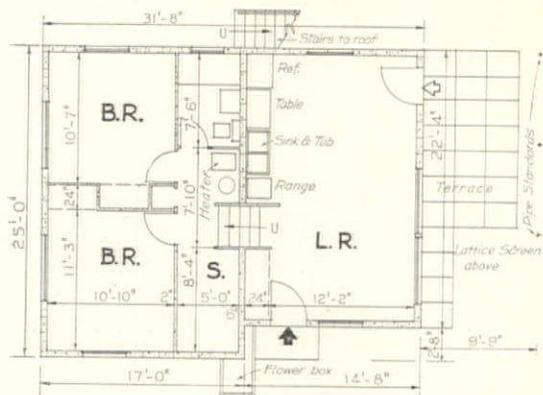


TYPE C.

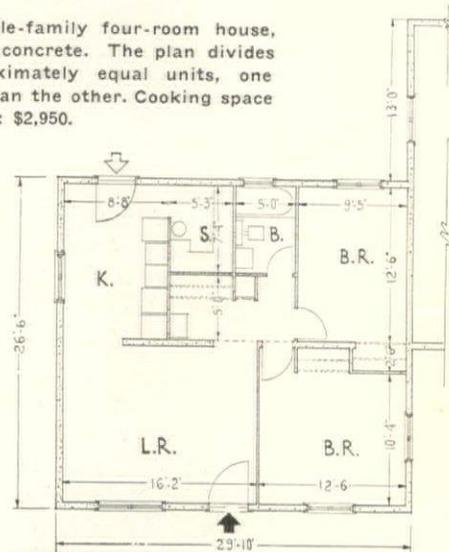


TYPE E.

FWA Photos

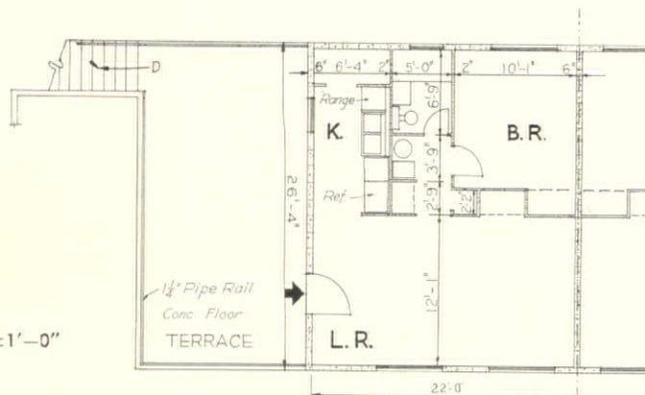


TYPE C is a single-family four-room house, built entirely of concrete. The plan divides into two approximately equal units, one slightly higher than the other. Cooking space is exposed. Cost: \$2,950.

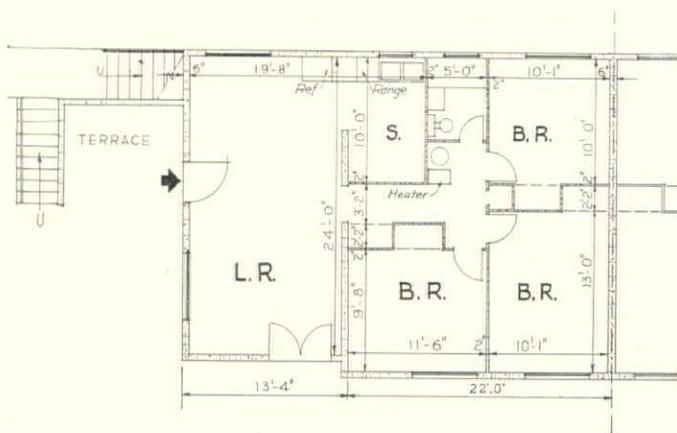


TYPE D covers three buildings of three units each. One unit is shown above. The plan is somewhat more conventional than the others shown. Good use is made of the offset units to gain more light and air.

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



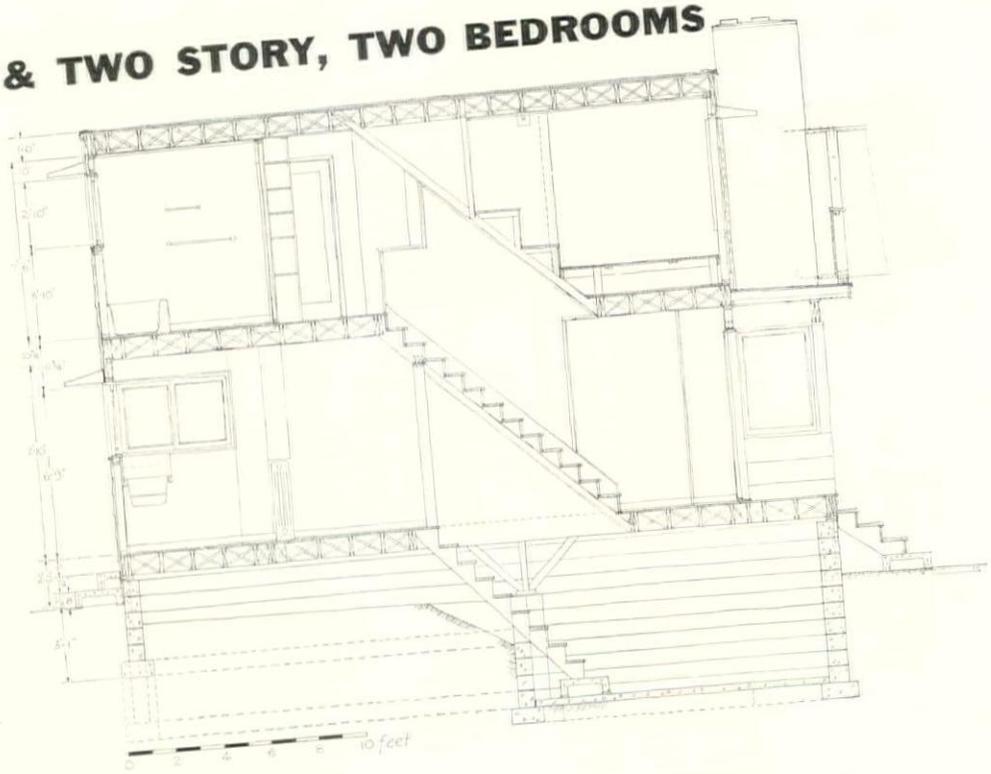
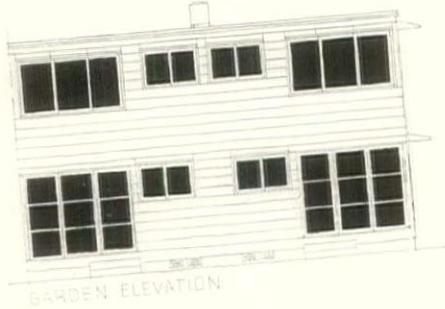
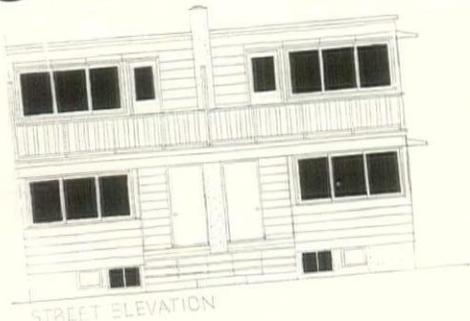
SECOND FLOOR



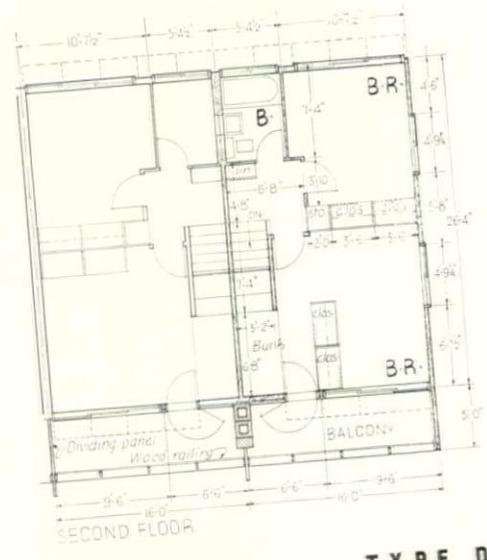
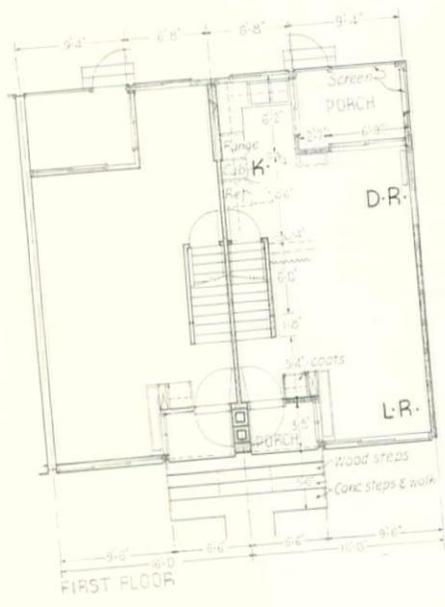
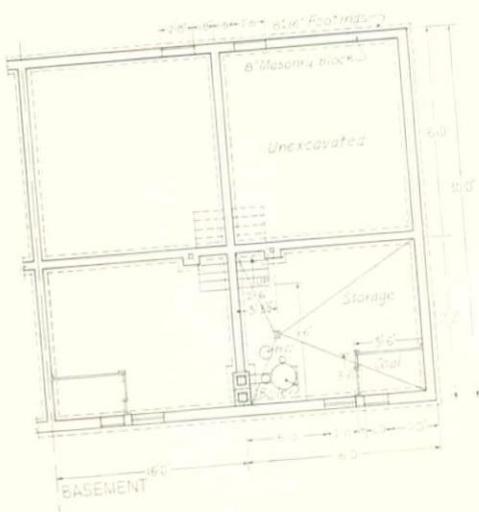
TYPE E shows an interesting apartment scheme, with an outside entrance to the upper floor and a terrace over the ground-floor living room. The construction is largely precast concrete, in the form of block and plank. As in the other schemes, kitchens are more or less open to the living rooms. Average cost per unit: \$2,641.

*Constructing agency: FWA Division of Defense Housing.

3 HOUSE TYPES, ONE & TWO STORY, TWO BEDROOMS



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

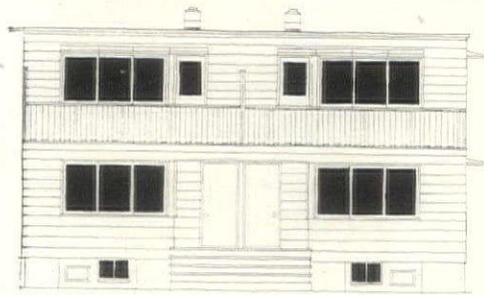


TYPE D.

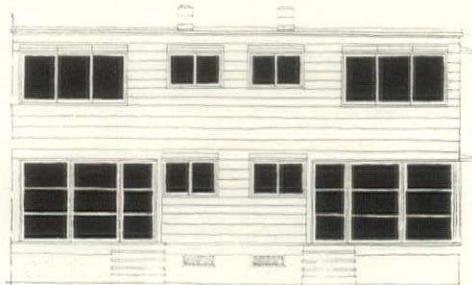
TYPE D (above) is a 2 story, single-family row house with 2 second-floor bedrooms and partial basement. Living, dining, and kitchen areas on the first floor are merged into one large space; a recessed, sheltered entrance has been added at the front, and a screened porch at the rear. The second floor plan is featured by a balcony running across the front and a small bunk room, opening off the larger of the two bedrooms and screened by prefabricated closet units.

TYPE E (shown on facing page) is similar in plan to the house above, but is 2 ft. 6 1/2 in. wider and has a post and girder frame and joistless, plank floors. Only six 4 x 4 columns are used per house, and the 1 5/8 in. plank floors are cantilevered front and back and span 5 ft. Both houses employ horizontally-sliding wood windows and have horizontally-sliding doors between the living room and rear porch. In each, a curtain is provided to shut off the dining room-kitchen from the front part of the living room.

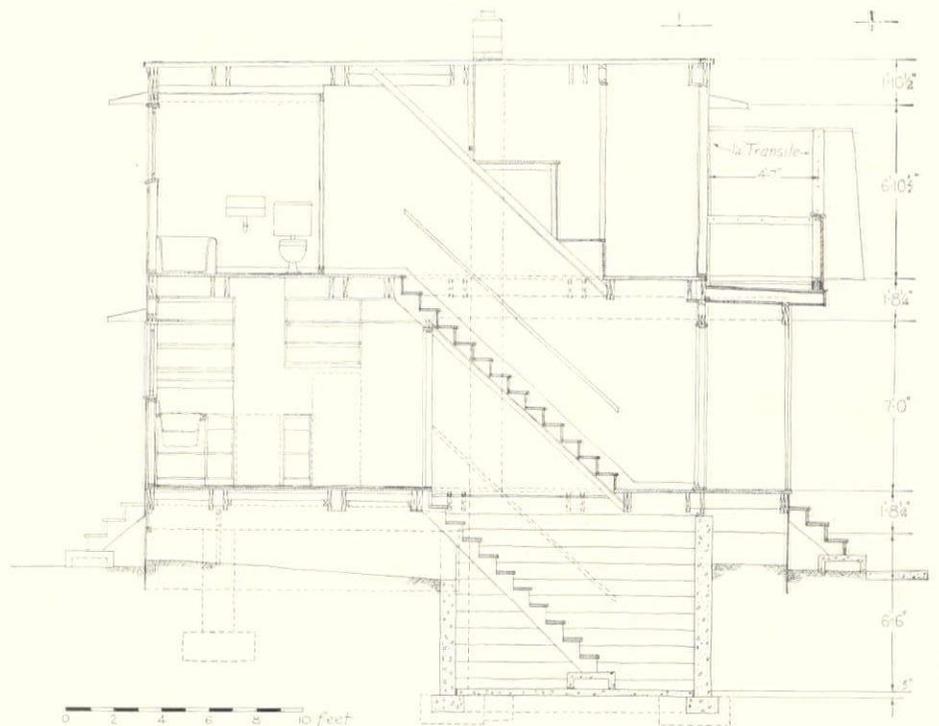
Part of a 750-house program for the Allentown-Bethlehem area, this project includes 168 dwelling units, mostly of the one-family, row house type that is traditional in this part of the country. All of the houses are of frame construction with flat roofs and wood windows. Partial basements, with individually coal-fired heating plants are provided. Four of the buildings, comprising twelve dwelling units, were set aside as "experimental units" (see site perspective, facing page). Buildings E and D, shown above and at the right, are variations of the typical row house used throughout the project providing such added features as screened porches set into the building, horizontally-sliding doors and windows, and a second-floor balcony. Building E (right) also employs an experimental framing system. The F-type unit, shown on the second page following, is a one-story, freestanding house differing radically in both plan and structure from the balance of the houses. Average construction cost of the experimental houses was \$3,000 per family.



STREET FLOOR

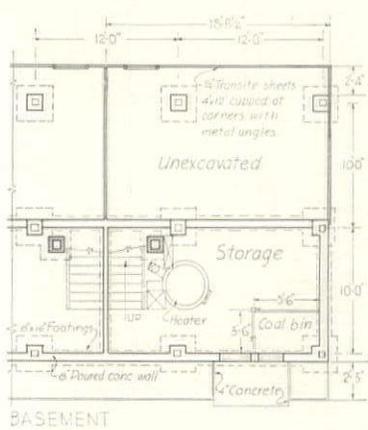


BARDEN ELEVATION

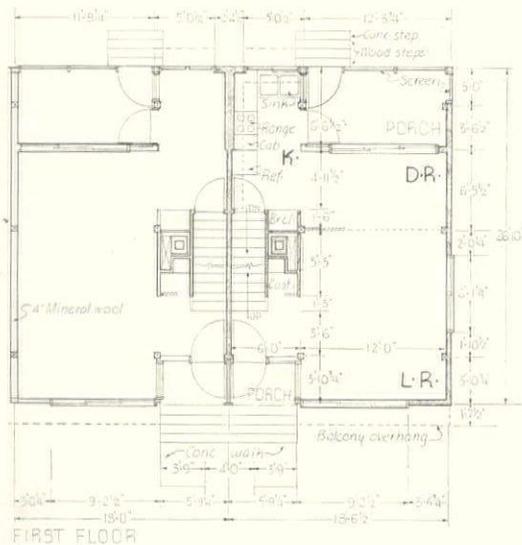


0 2 4 6 8 10 feet

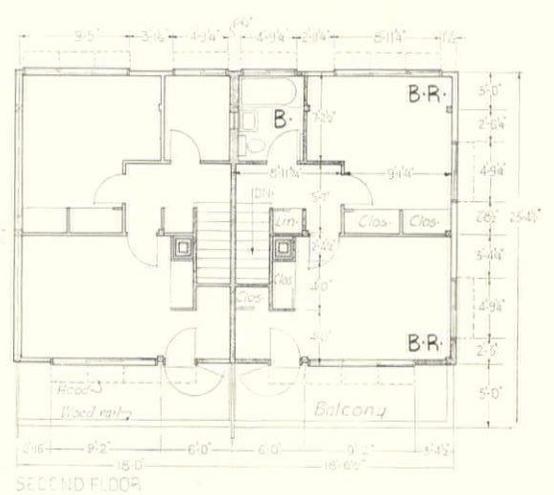
SCALE: 1/16"=1'-0"



BASEMENT

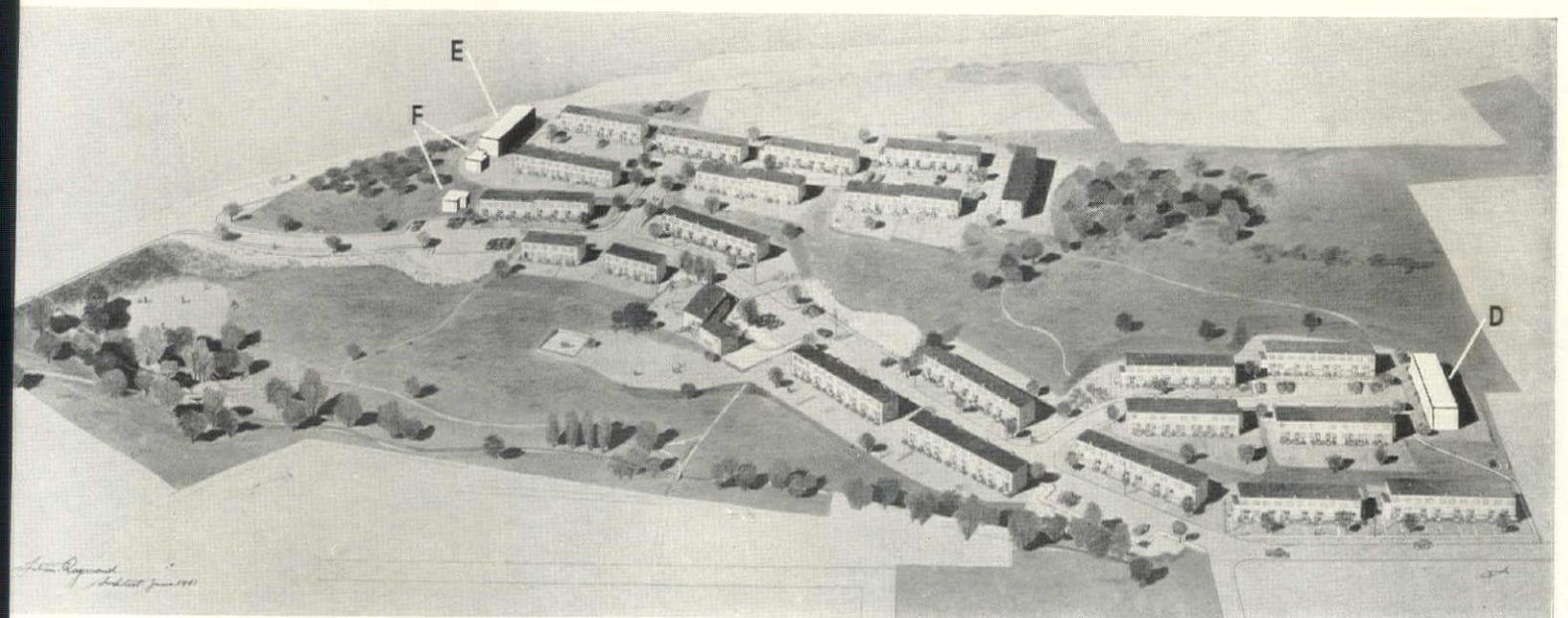


FIRST FLOOR



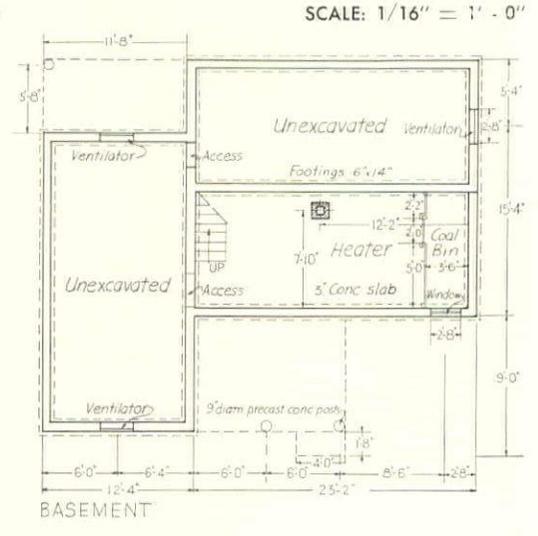
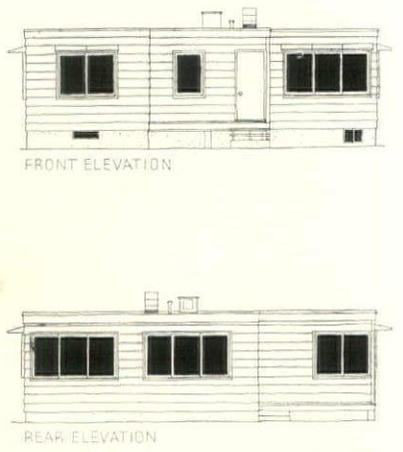
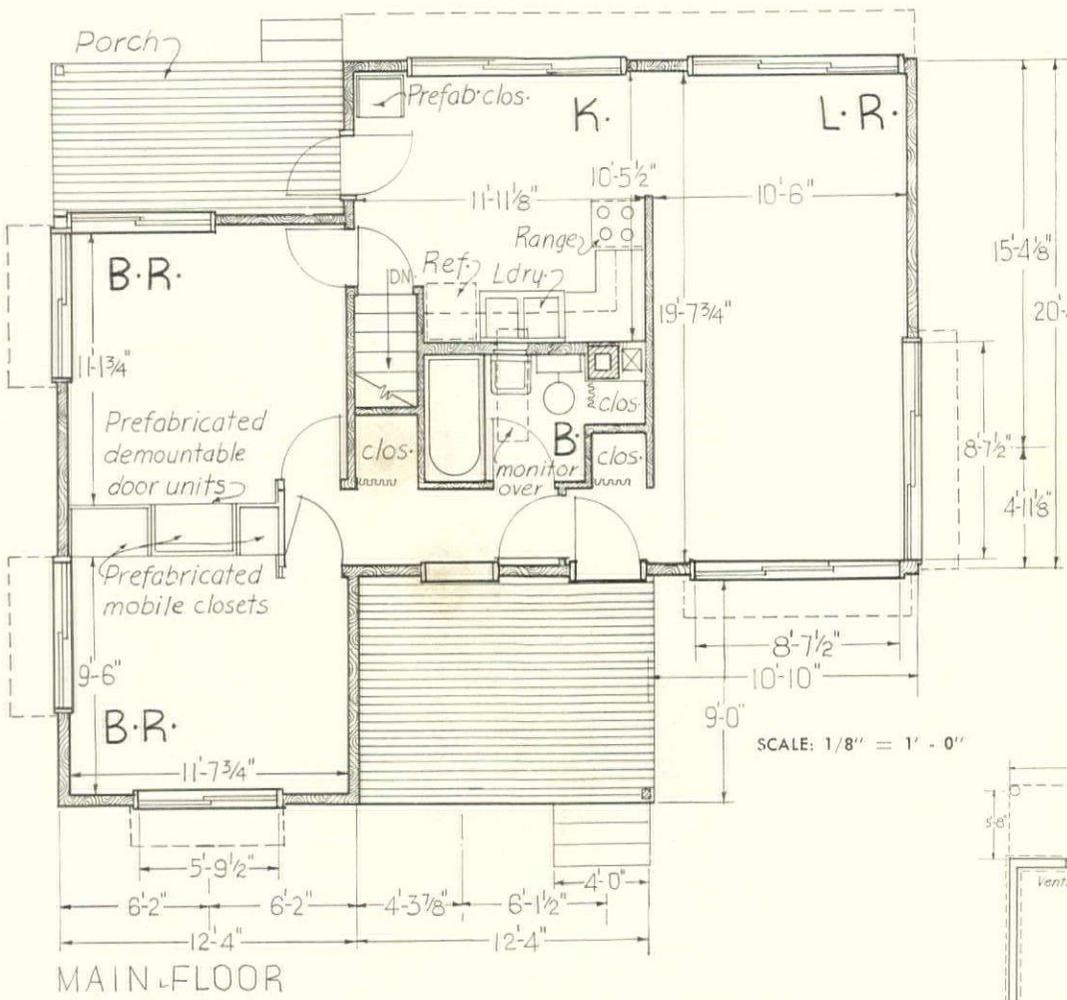
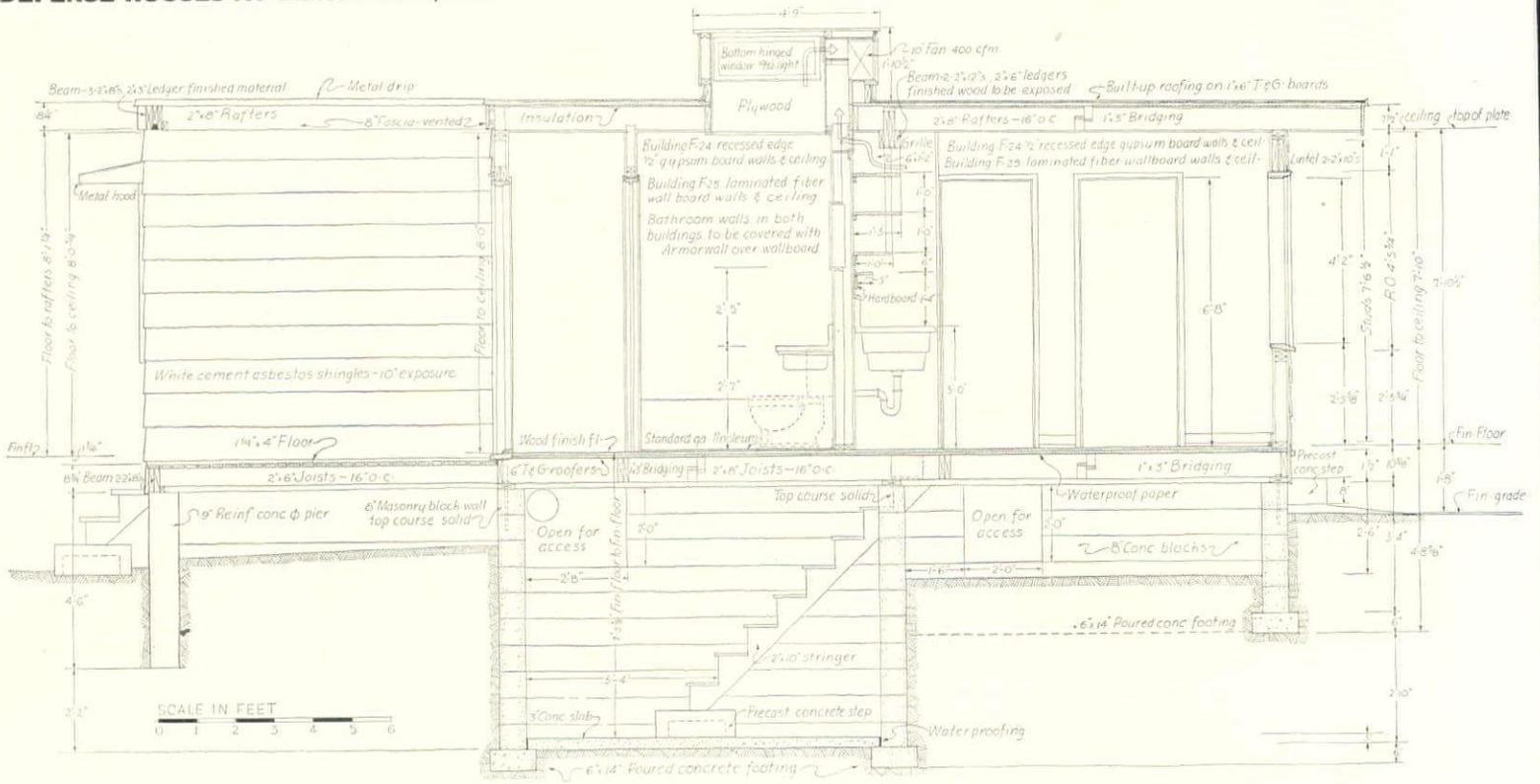
SECOND FLOOR

TYPE E.



*Constructing agency: United States Housing Authority

DEFENSE HOUSES AT BETHLEHEM, PA.



TYPE F is an unusual one-story freestanding house with two bedrooms and an inside bath. Concentration of the utilities section in the middle of the house permits unusually free circulation and increased flexibility. Prefabricated closet units can be moved to vary the size of the two bedrooms or even shifted into the identically-sized living room should this prove desirable. Light and ventilation for the bathroom is provided by a monitor in the roof, shown in detail on the next page.

4 HOUSE TYPES, ONE & TWO STORY, ONE & TWO BEDROOMS

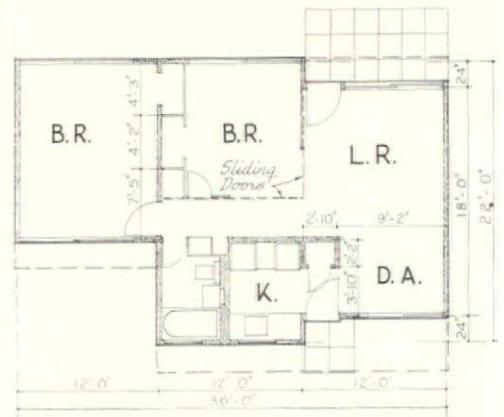


R. A. Kolboord Photos



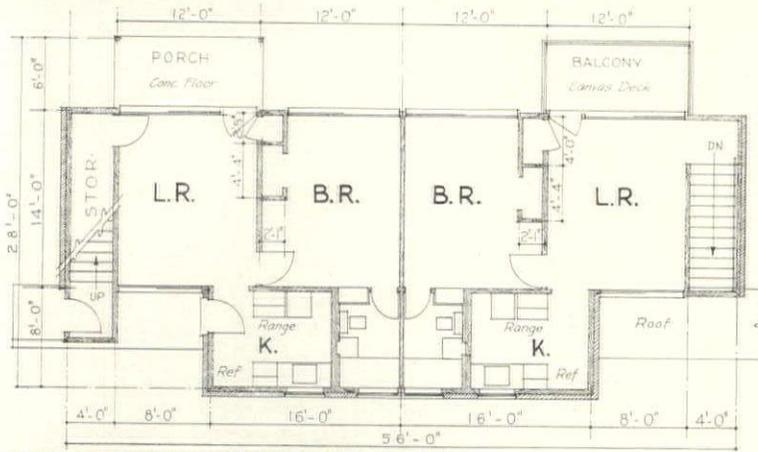
ROSCOE P. DE WITT, ARCHITECT, DAVID R. WILLIAMS, RICHARD J. NEUTRA, CONSULTING ARCHITECTS

Avion Village is a 300-unit project built to house workers from nearby airplane factory, and forms part of a larger public and private housing scheme for Dallas as a whole. Its site is completely flat, and left the architects free to group the houses without regard for topographical limitations. Houses are largely of the one-story type, and those with two bedrooms make up almost two-thirds of the total number of dwellings. The two-story porches on some of the buildings mark in an interesting fashion the return of an important element in the traditional American scene; their use in the Texas climate seems to make particularly good sense. Construction methods included a great deal of prefabrication at the site. Average construction cost per unit: \$2,562.50.



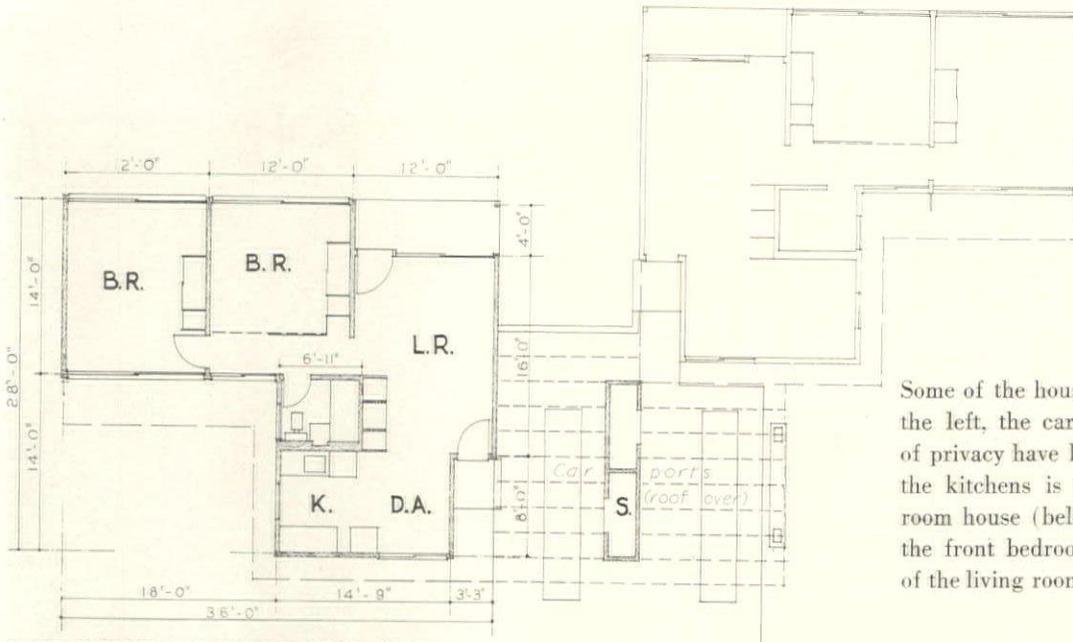
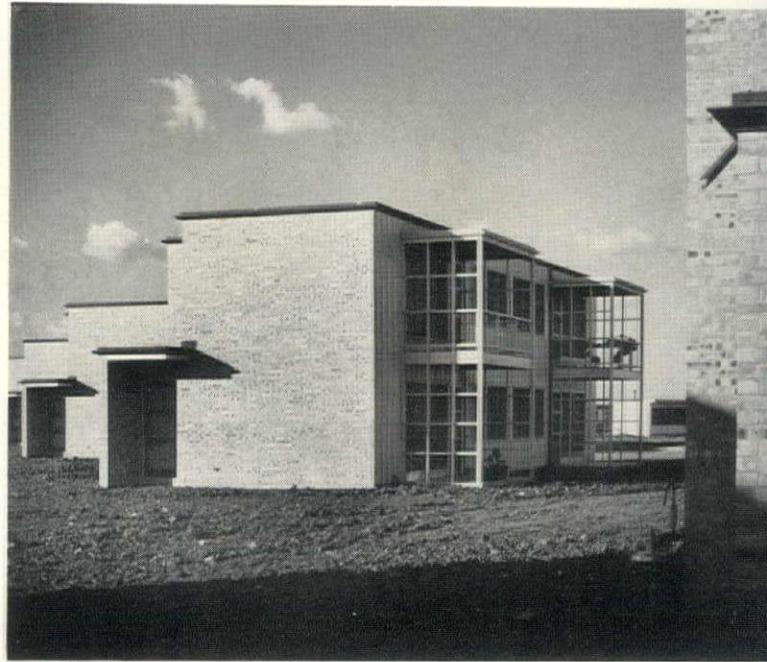
ONE STORY, 2-BEDROOM UNITS

DEFENSE HOUSES AT GRAND PRAIRIE, TEXAS*



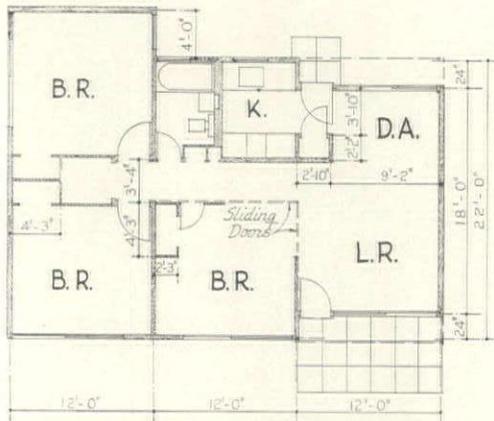
TWO STORY, 1-BEDROOM UNITS

The two story houses contain four one-bedroom apartments, each with its private hall. There is no ground-floor storage space for the second-floor apartments, but since the dwellings are not suitable for families with children the disadvantage is not a serious one. Provision for through ventilation in all apartments is excellent.



ONE STORY, 2-BEDROOM UNITS

Some of the houses have been grouped as shown at the left, the carports acting as a link. Problems of privacy have been solved well and the placing of the kitchens is exceedingly good. The three-bedroom house (below) shows an unusual treatment of the front bedroom, which can be made into a part of the living room by pushing back two sliding walls.



ONE STORY, 3-BEDROOM UNITS

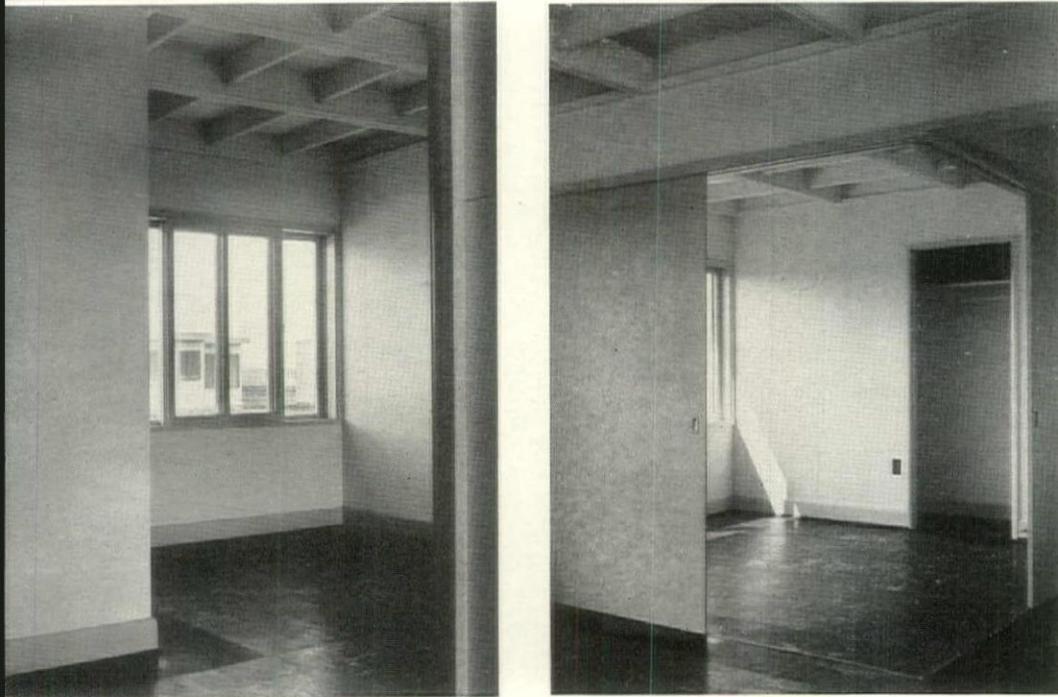


BEDROOM

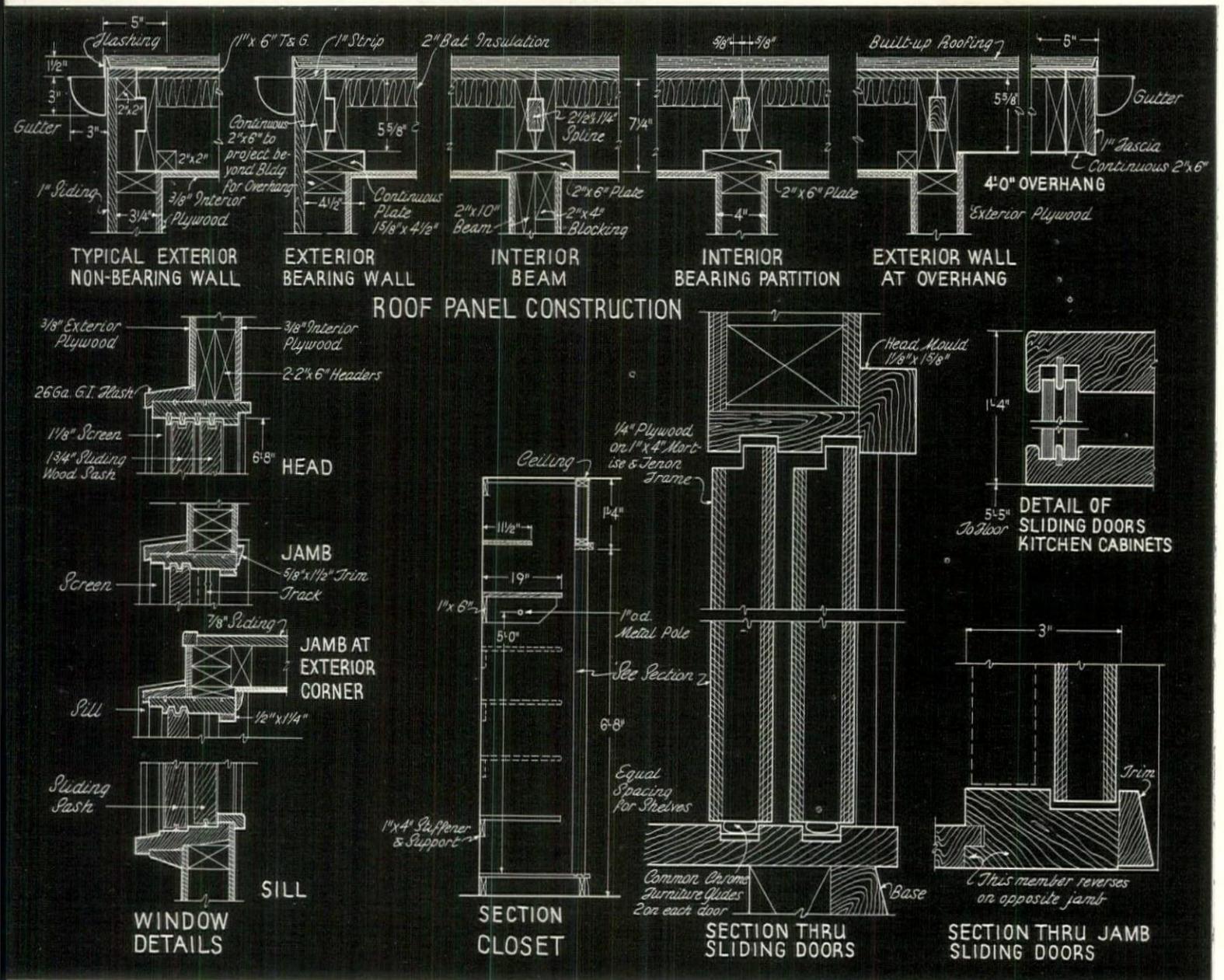


DINING ALCOVE

*Constructing agency: FWA Mutual Ownership Defense Housing Division



Interior photographs (left) show the attractive appearance of the underside of the exposed roof beams. Sliding doors open the corner of the bedroom into the living room, doubling its apparent size. Details below show still another panel roof construction, as well as horizontally-sliding windows and closet details, and kitchen cabinet doors.



BUILT-IN FEATURES

America has always taken inordinate pleasure in its overflowing ingenuity. The patent office is full of millions of ideas for making life simpler by making its mechanics more complicated. From the time of Thomas Jefferson and his dial weathervane, our houses have displayed a continuing delight with clever innovations — folding stairs, firewood lifts, sliding doors, illuminated street numbers and thousands now gone beyond recall. None of these by itself has effected any upheavals in architecture, but taken as a whole they have expressed a national philosophy and molded a unique residential type.

The hundred-odd design features in this section are not gadgets. They cannot be installed in any house like a mechanical eggbeater or three-tone chimes. With few exceptions they were designed for and built *into* the houses. While some are obviously intended for the rich, many can be adapted to the most modest homes.

The importance of these design features, culled from hundreds developed in all parts of the country, might as easily be underrated as overemphasized. There is a clearly understandable difference between the basic operation of providing shelter and the creation of some architectural feature for adding to an already substantial degree of comfort. Nevertheless, as already pointed out, the sum total of such features can modify the original process of planning to the point where a new plan will emerge. This has happened before and it is happening today.

To the designer of 1941, both large and small problems merit equal consideration. He is convinced of the need for efficiency in house design. Having profited by earlier mistakes, however, he no longer believes that reality is always stark. He knows that the efficient kitchen need not be all white or have everything within arm's reach of the sink, he has learned that the home work center differs practically and psychologically from that of a hospital. He knows that built-in furniture may be a boon or a perennial headache to the housewife and he plans accordingly. By and large, regardless of the color of his stylistic preferences, he has ceased confusing the appearance of efficiency with its actuality.

In all of which minutiae there may be little which "has the magic to stir men's blood," but perhaps in these days of super-colossal plans it is well to preserve one spot where we can satisfy the urge for intimate and gracious living.

INDEX TO BUILT-IN FEATURES

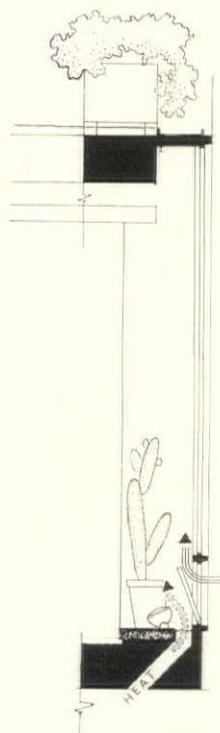
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LIVING ROOM PICTURE WINDOW



WALTER F. BOGNER, Architect, Cambridge, Mass.

Provision of a living room picture window is not simply a matter of installing a sufficiently large panel of fixed glass; as this example demonstrates, it presents complex problems of heating, ventilation, and protection from the sun which must be solved if it is to be a complete success. This window, located in a south wall, is shaded by a hood projecting over the second floor porch, has ventilating sash placed well below the eye-line to furnish fresh air for the plant shelf, and a heating inlet which provides an insulating blanket of warm air to protect the room from drafts that might otherwise be induced by the cold surface of the glass.



Paul Davis Photos

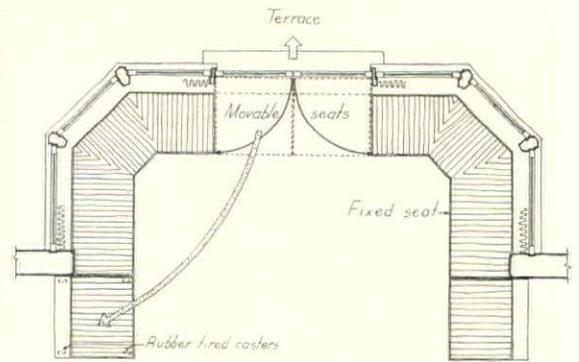


CONVERTIBLE BAY WINDOW



GARDNER A. DAILEY, Architect, San Francisco, Calif.

Movable padded benches may be placed either at the center or the sides of this bay window according to the season: in summer, when the terrace outside the window is in use, they are placed at the ends so as to create an opening for the swinging doors; in winter they are moved to the front of the opening to form a U-shaped recess.

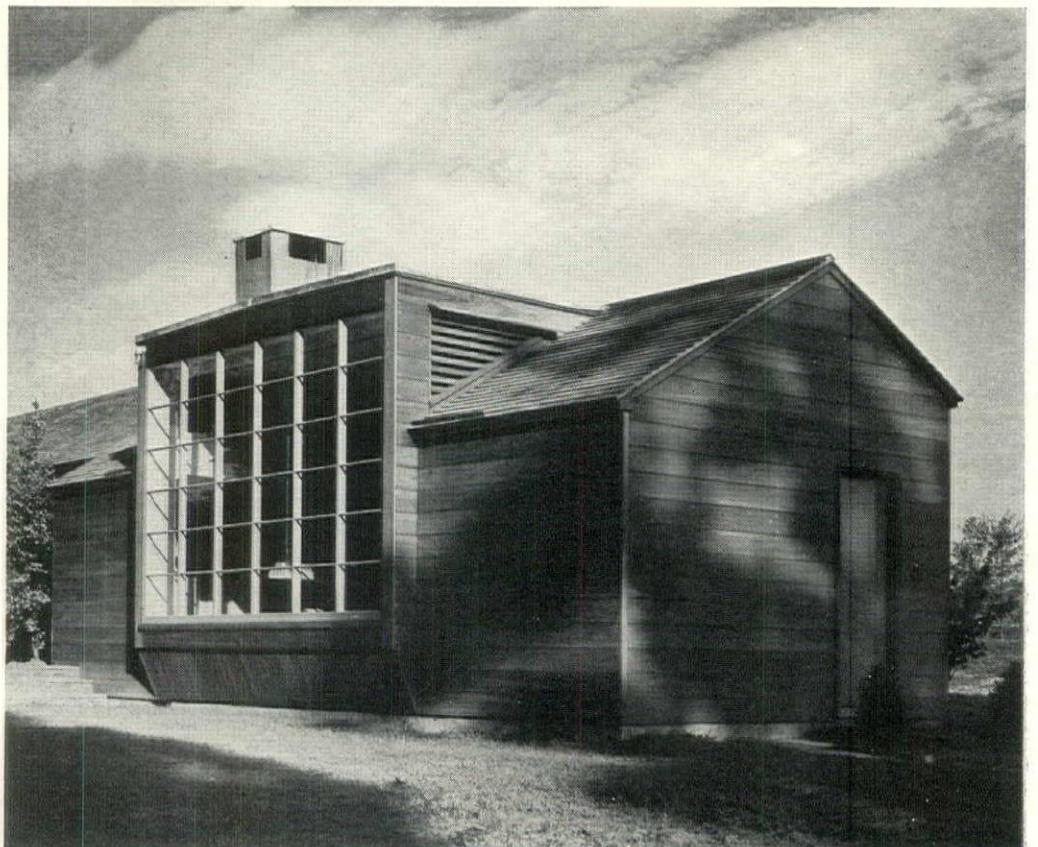
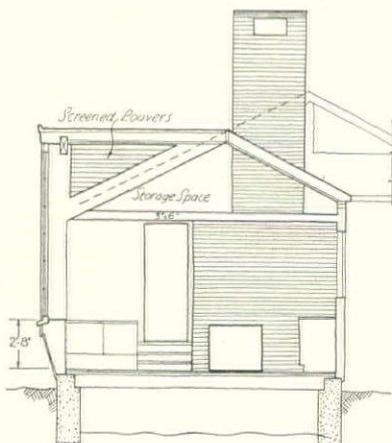


PLAN
0 1 2 3 4



WORKSHOP WINDOW

Most hobbies benefit from plenty of daylight; for photography, painting, woodworking and the various handicrafts it is almost essential. A "studio" window of this type can be constructed from inexpensive materials at relatively low cost and will add much to the enjoyment of the amateur craftsman or artist.



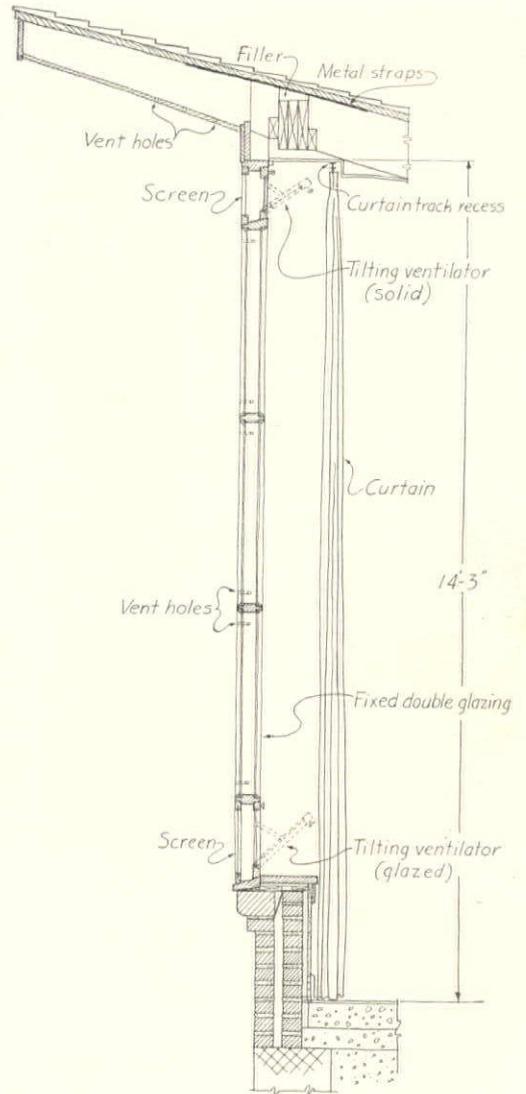
VICTORINE & SAMUEL HOMSEY, Architects, Wilmington, Del.

DOUBLE-GLAZED PICTURE WINDOW

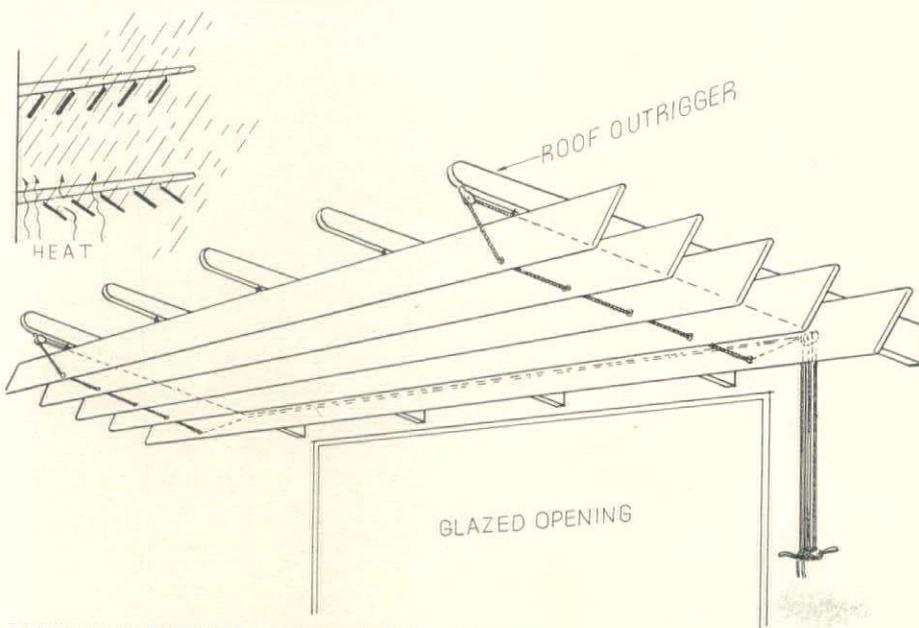
Samuel H. Gottscho



HENRY N. WRIGHT, Designer; HORNBOSTEL & BENNETT, Associates, New York, N. Y.



The fixed window, with small horizontal ventilator sash at top and bottom, has the advantage that no screens interfere with the view. Also, it is relatively easy to double glaze, thus avoiding large areas of cold glass. In the window above, ventilator panels are projected inward, with plenty of room between the window and the drape for the fully-opened sash.

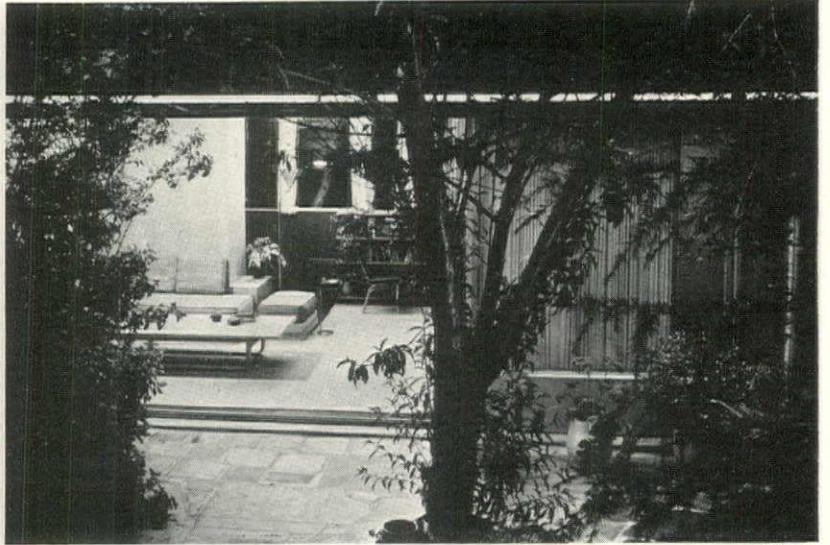
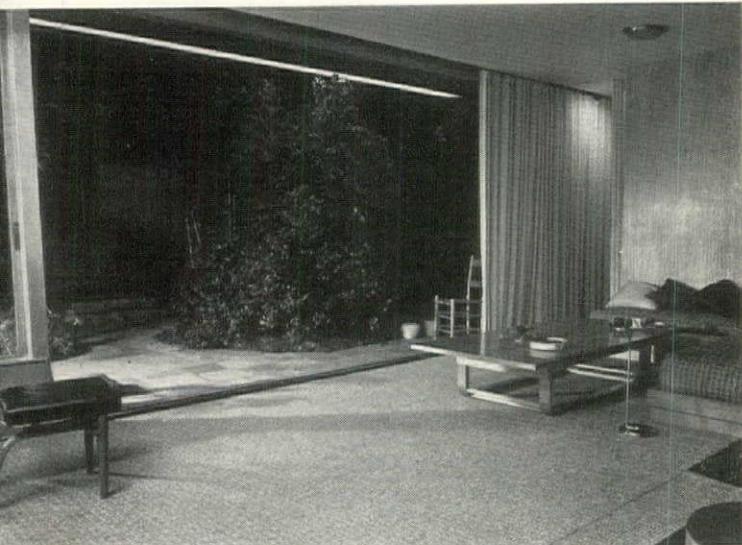


RICHARD M. BENNETT, Architect, New York, N. Y.

ADJUSTABLE SUN SHADE

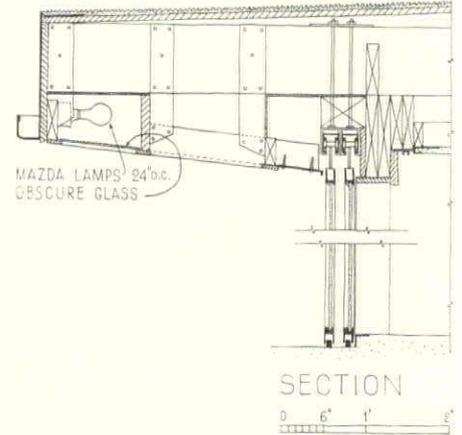
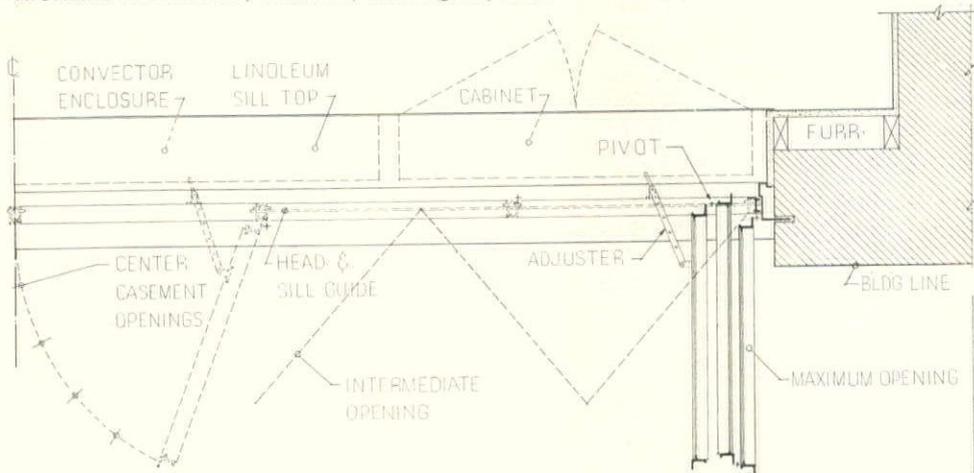
The drawing at the left shows an unusual sunshade which operates like a venetian blind turned on its side. As the diagram indicates, it will never be necessary to close the shade entirely to shut out the sun, thus air circulation will never be impeded.

EXTERIOR SOFFIT LIGHTING



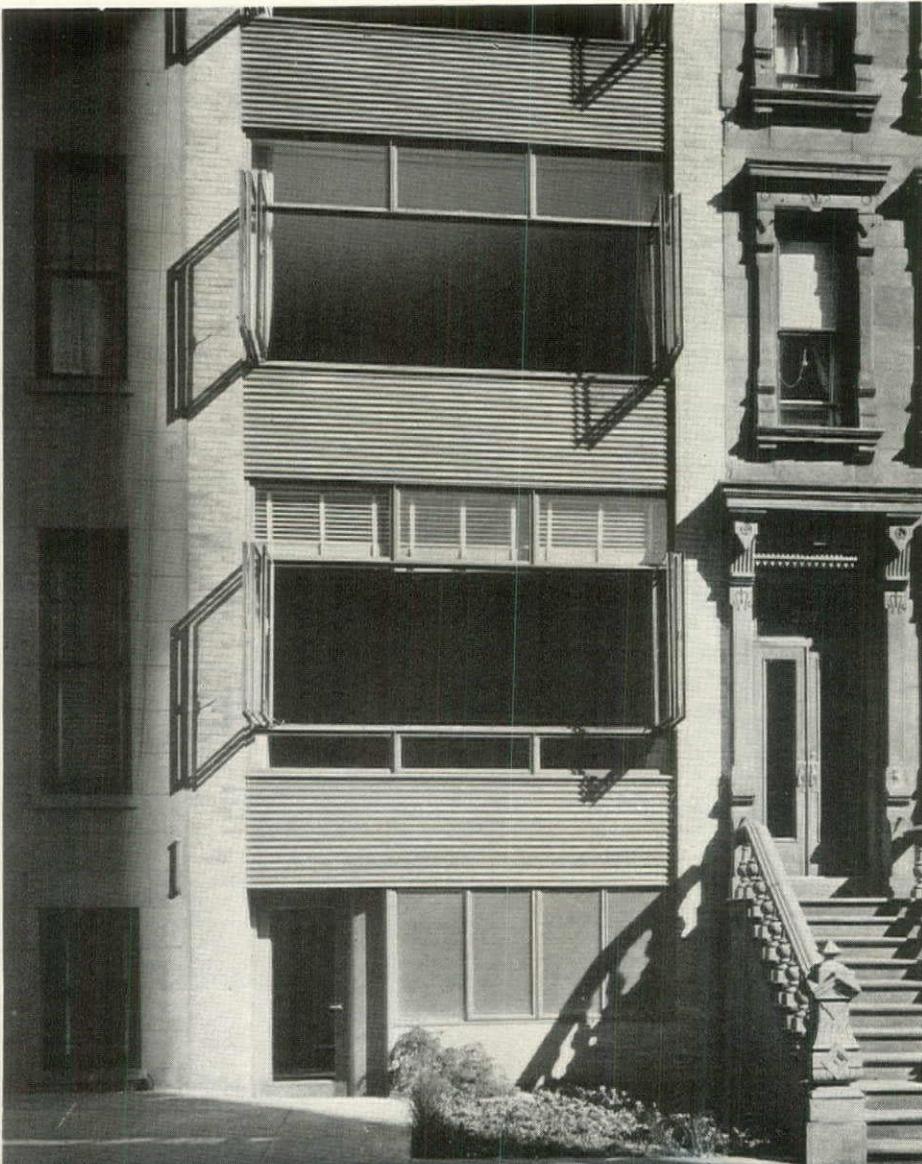
RICHARD J. NEUTRA, Architect, Los Angeles, Calif.

Julius Shuman Photos



FOLDING-SLIDING WINDOWS

Schnall



Most of the light for this glass-walled living room, which faces a landscaped patio, is furnished by a diffusing glass panel in the soffit of the overhang outside the window, thus illuminating the garden outside and making it an integral part of the room whether or not the sliding door is open.

The living rooms in this city apartment are transformed into virtual porches by room-width, folding and sliding windows which leave the opening entirely unobstructed. Two sections of three sash each fold out and slide against the jambs; storage cabinets and a convector enclosure provide a deep linoleum sill and afford added security.

SANDERS & BRECK, Architects
SMITH-MILLER, Associate, New York, N. Y.

WINDOW SHELVING

Daniel Reynolds Merrill

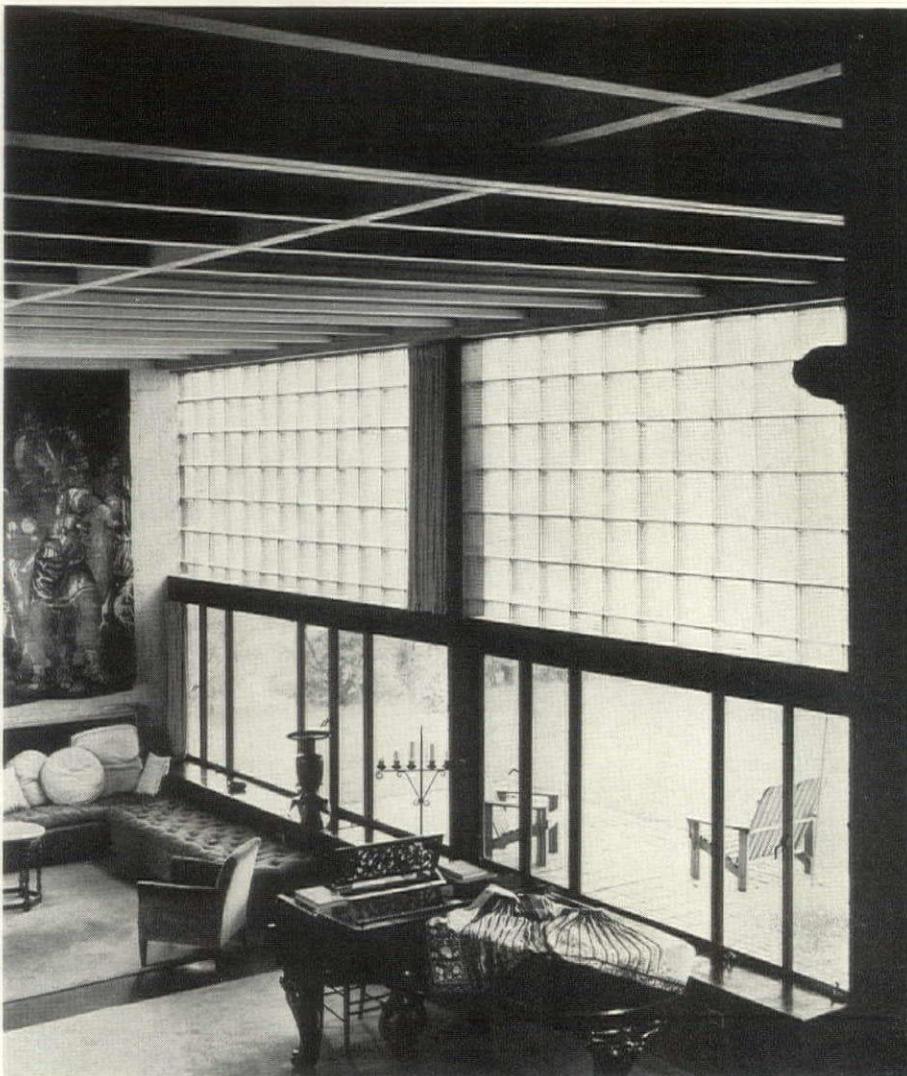


J. LLOYD BERRALL, Architect, Montclair, N. J.



GEORGE KOSMAK, Architect, New York, N. Y.

GLASS BLOCK CLERESTORY



Robert M. Damora

Decorative window treatment is by no means confined to the modern style, as the details above demonstrate. At the left is a regular double hung window fitted with wood shelves that line up with the muntins, provide an ideal setting for the display of glassware. At the right an attractive picture window is used for dining. Glass in the large panel is fixed, ventilation being supplied by movable sash at the sides.

Abundant, diffused light for this two-story living room is provided by this huge panel of glass block, while heat loss is reduced by the superior insulating value of the block over ordinary glazing.

KENNETH M. DAY, Architect, Philadelphia, Pa.



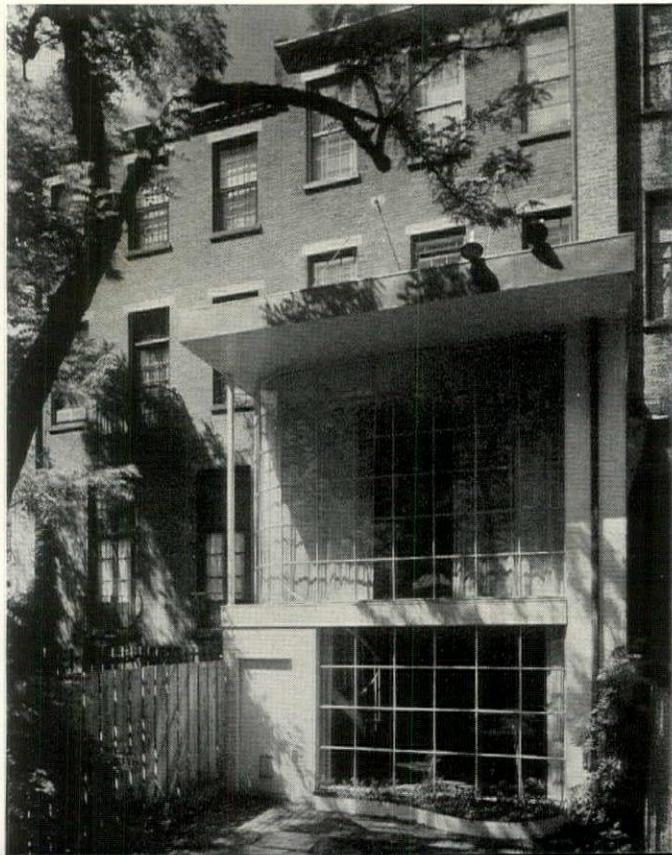
GLASS-WALLED LIVING ROOM

Daylight and outlook are both at a premium in the city house, creating special problems which call for skillful handling. In this instance, the architect has taken full advantage of an unusually attractive garden by providing a wall consisting entirely of fixed glass, projecting out from the body of the house so as to capture the view to one side. Sheer curtains temper the light when necessary while a heavier overdrape, illuminated by ceiling spotlights, may be drawn at night for privacy. The window is protected by a projecting hood which blocks the summer sun.

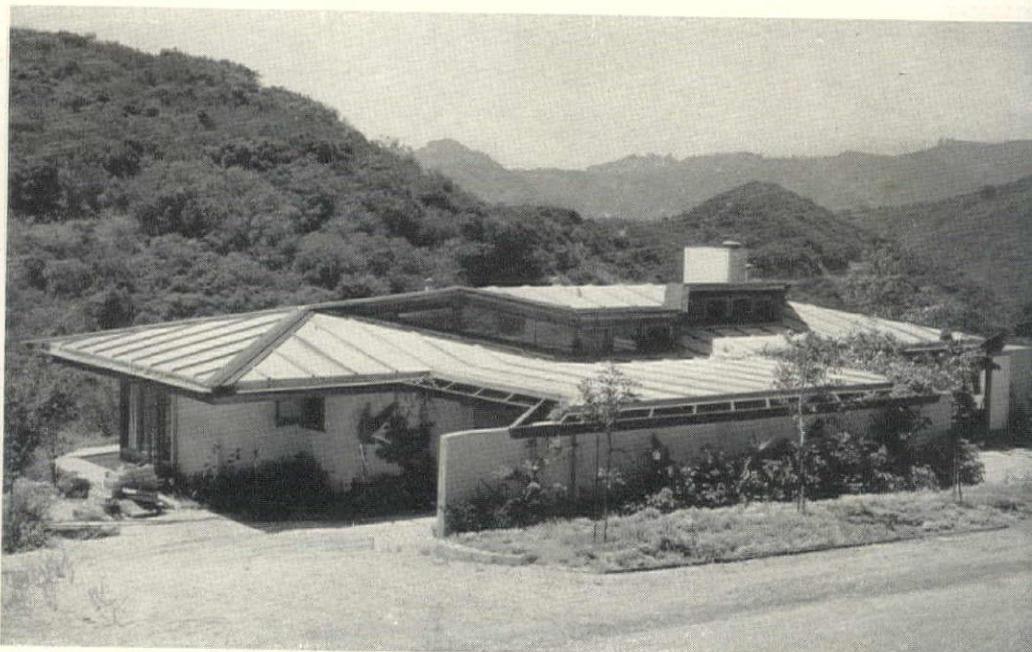


GEORGE KOSMAK, RUTH GERTH & ASSOCIATES, Architects and Designers, New York, N. Y.

Richard Garrison Photos



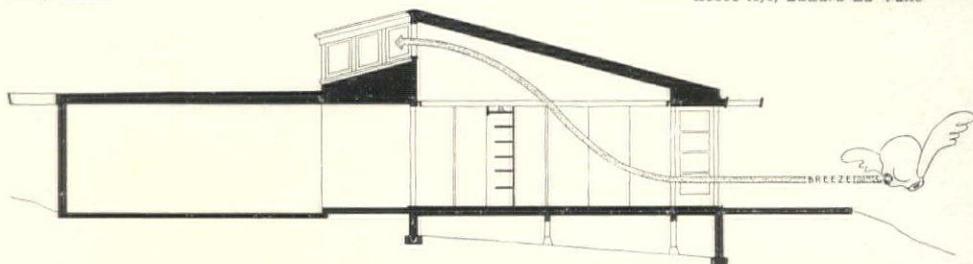
CLERESTORY DORMER



HARWELL HAMILTON HARRIS, Designer, Los Angeles, Calif.

Above left, Edward La Vaie

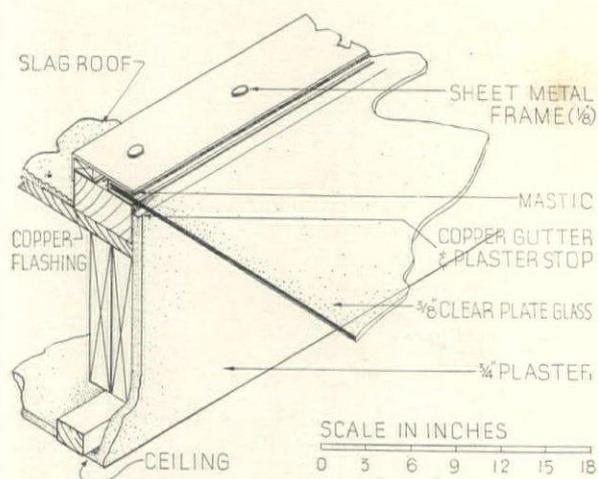
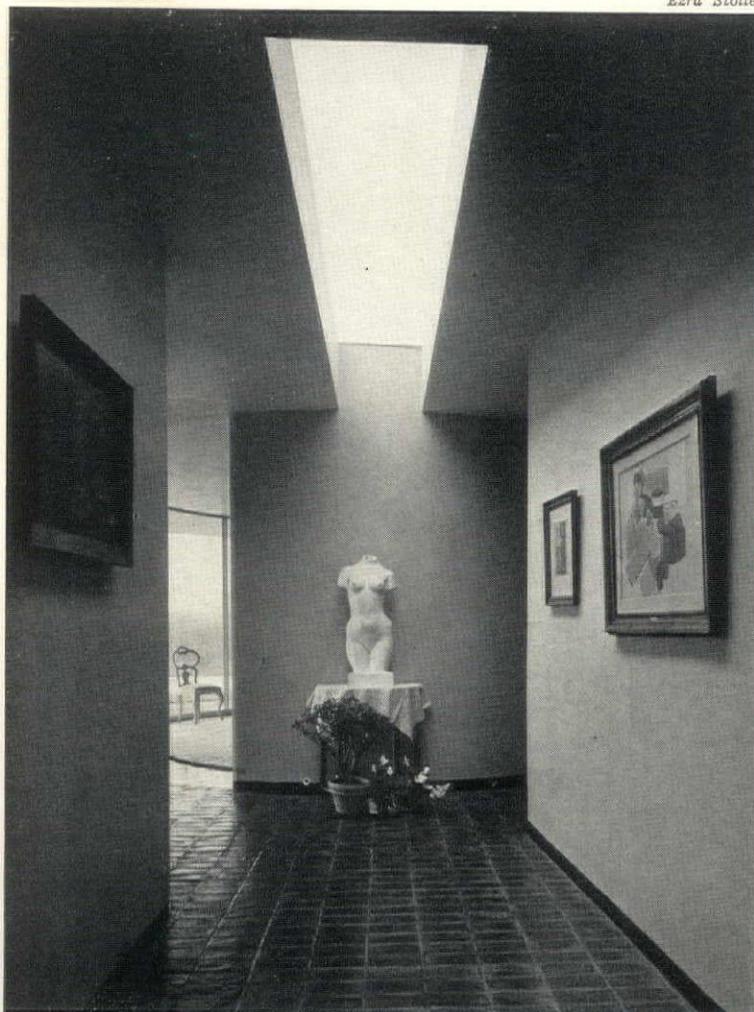
The big danger of the large, continuous windows employed in modern architecture is not, as is often asserted, that the light will become too bright but rather that it will become too one-sided, thus producing extreme contrast and glare. The solution of this problem, as given in this example, is not *less* light but *more*: the admission of at least some light from the side of the room opposite the view window to illuminate the shadows. High windows of this type are excellent for lighting, easy to build, and prevent the accumulation of hot air in the top of the room, thus inducing better ventilation.



HALL SKYLIGHT

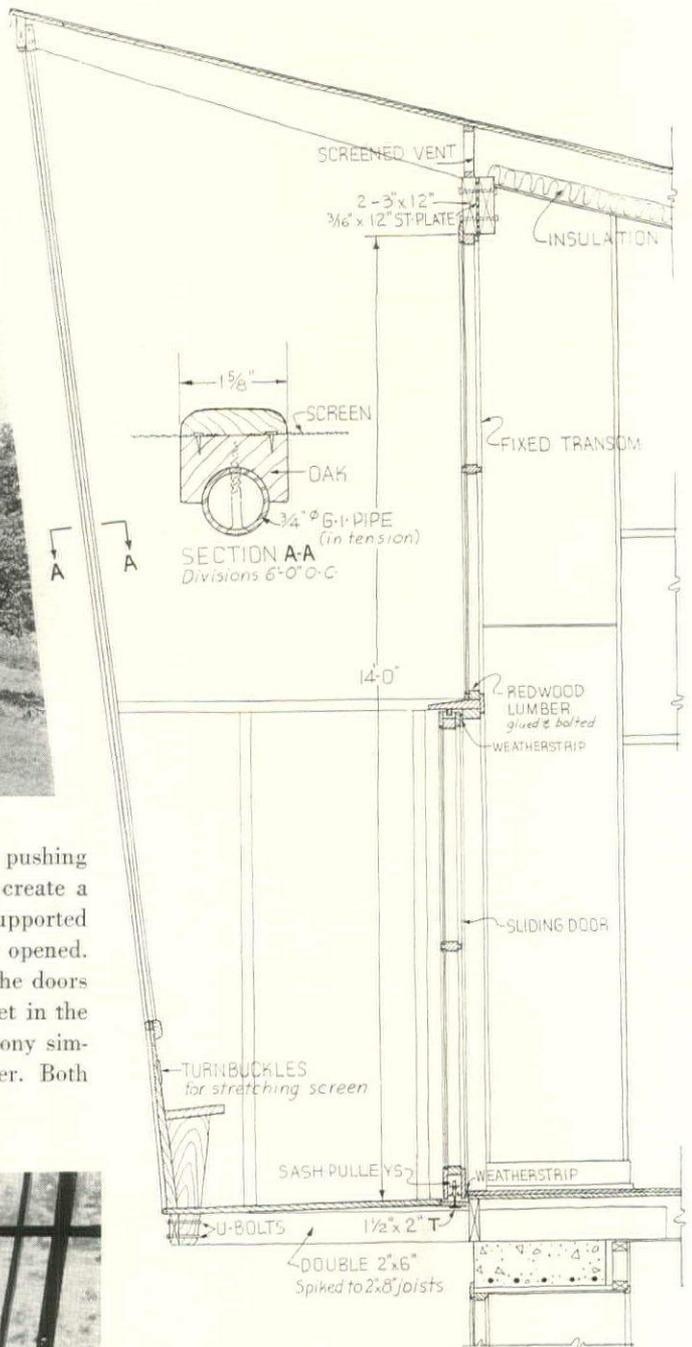
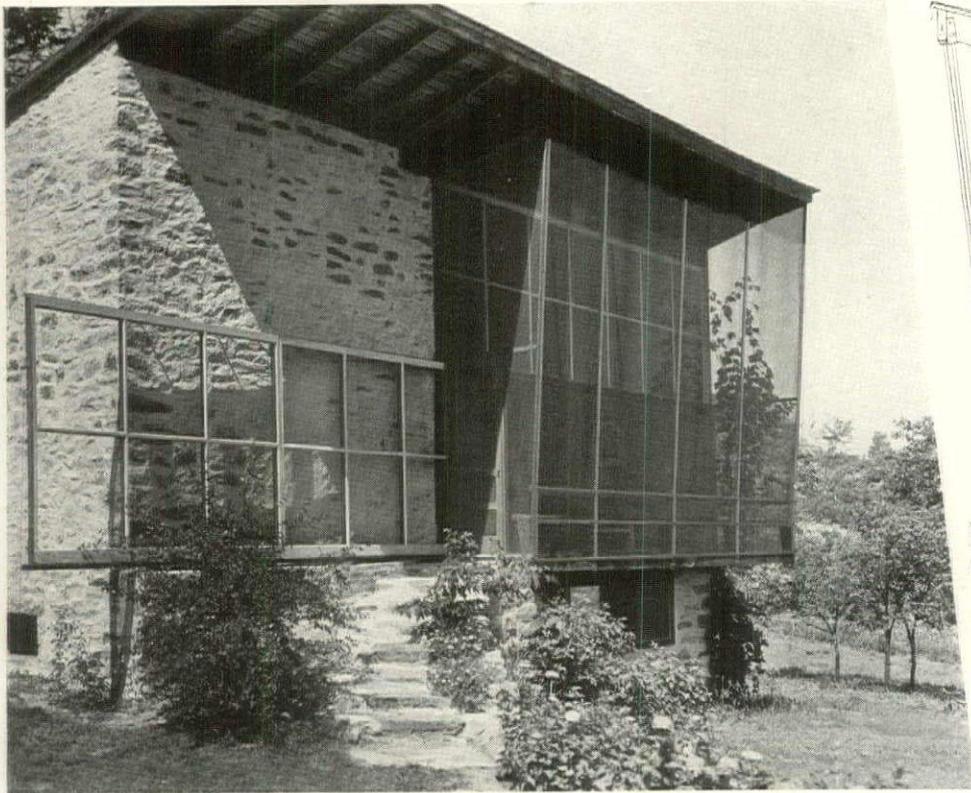
Ezra Stoller

As rooms receive more and more natural daylight, the importance of avoiding dark hallways is increased, since they will seem even darker to eyes which have not had time to adapt themselves to low levels of illumination. In the one-story house, and on the second floor of those with two floors, this can readily be corrected by the provision of small skylights like the one at the right, or by stepping roof levels up and down to make room for small, high windows as needed.



EDWARD D. STONE, Architect, New York, N. Y.

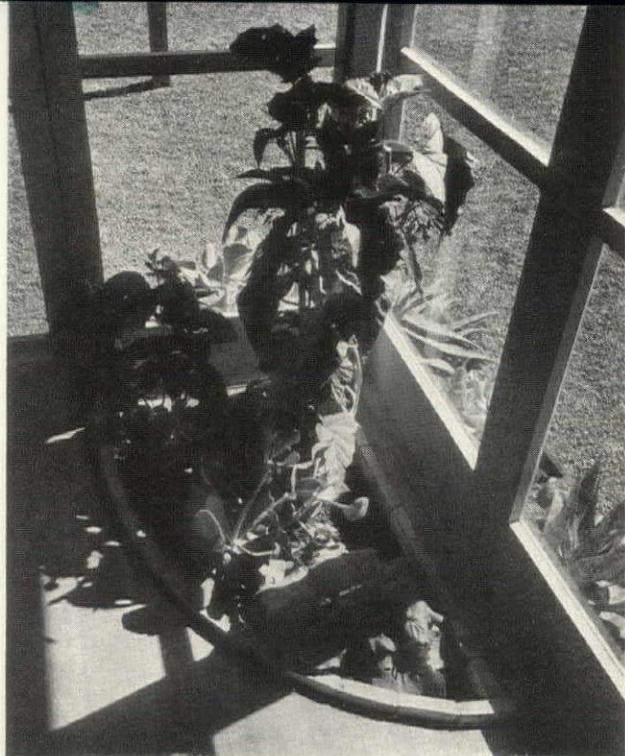
CONVERTIBLE LIVING ROOM-PORCH



Two-thirds of this country-house living room is transformed into a porch by pushing back the sliding doors which form the lower part of the huge window to create a clear opening 22 ft. wide. Doors slide outside the house on a T-bar track supported by the foundation wall, and project beyond the corner of the wall when fully opened. They are guided at the top by a thin strip of oak which is in contact with the doors only at the two upper corners and is bracketed out from the wall on bolts set in the masonry, roll easily on ordinary sash pulleys. Provision of the narrow balcony simplifies screening and makes cleaning of both sides of the glass an easy matter. Both upper and lower parts of the window are fitted for double glazing.

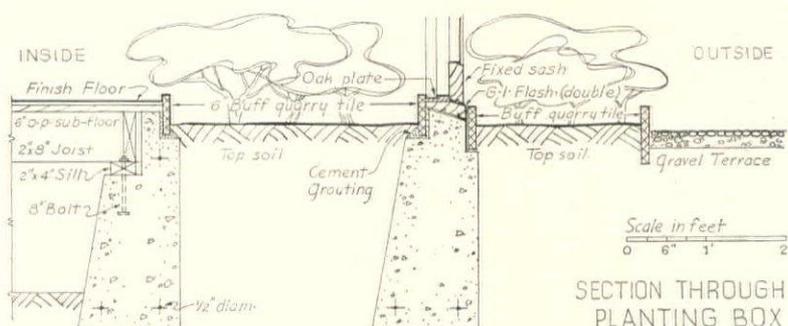
PAUL GROTZ, HENRY N. WRIGHT
Designers, New York, N. Y.



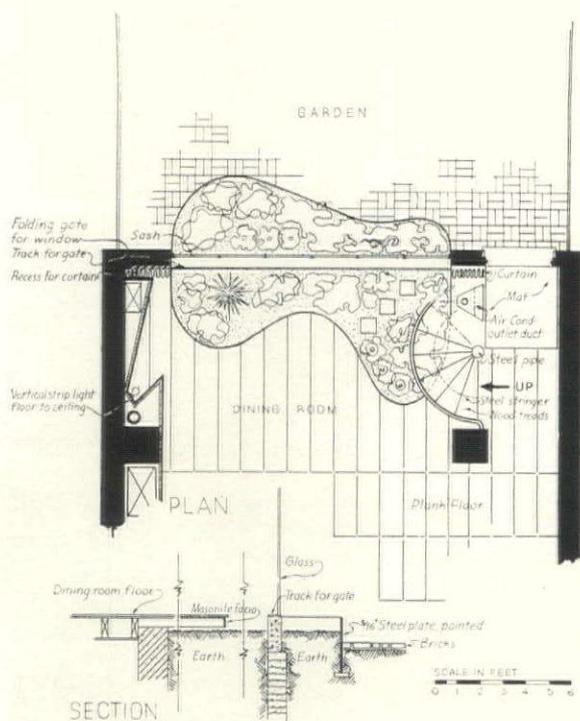


ESTHER BORN
HERVEY PARKE CLARK, Architect, San Francisco, Calif.

PLANTING POCKETS



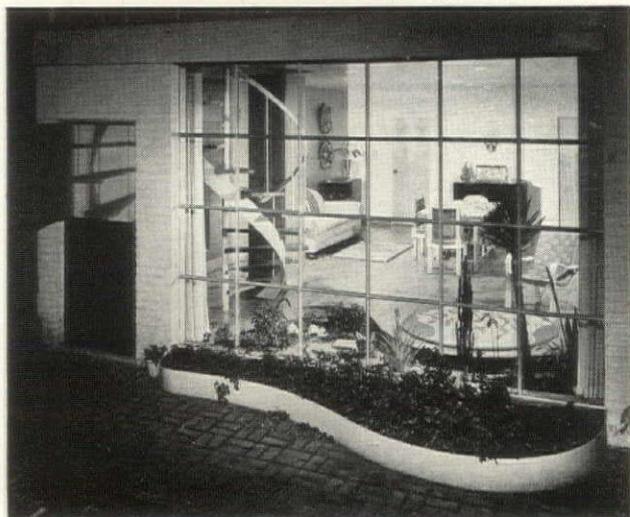
"Bringing the outdoors in" is nowadays more than just an abstraction: more and more living rooms make provision for actual planting within the building an integral part of the design. Such planting pockets vary from a corner of a room set aside for a few flowers, as in the picture at left, to whole windows given over to miniature gardens, as in the example below.



Richard Garrison Photos



GEORGE KOSMAK, RUTH GERTH & ASSOCIATES, Architects and Designers

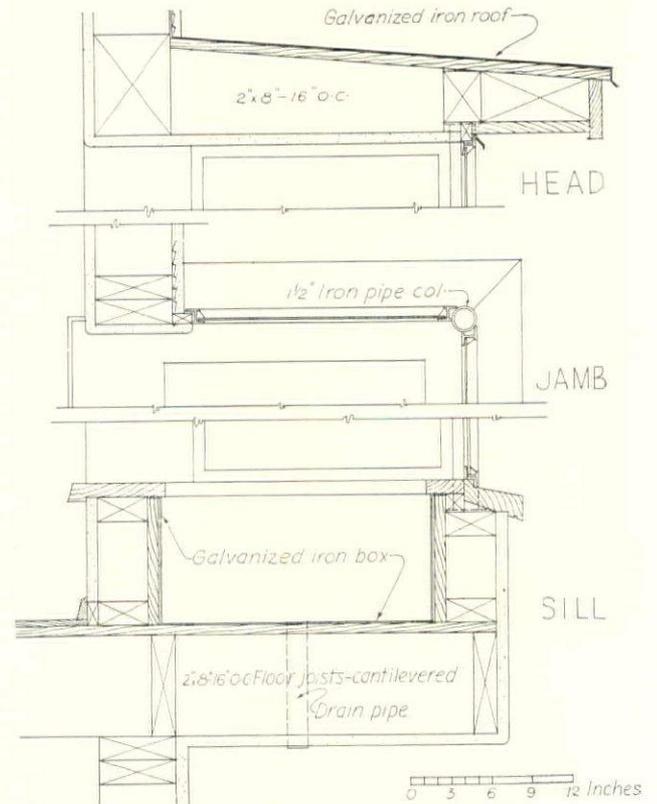


This free-form indoor garden combines with a planting bed outside the window to unite the dining room and garden of a city house. The door to the left of the window contains a hinged panel for pets, who are thus able to go in and out of the garden at will.

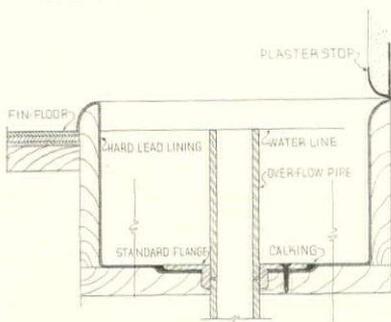


Julius Shulman

INTERIOR PLANTING

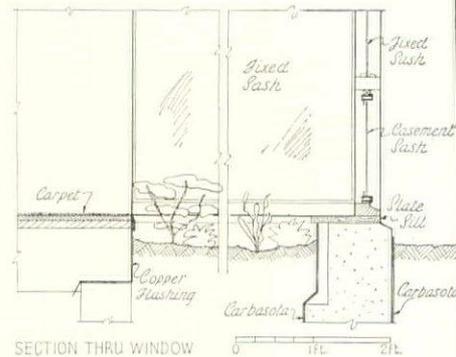


PAUL LASZLO, Designer, Beverly Hills, Calif.



Plants have moved into the modern house with an abundance almost Victorian. Above, a large bay window with a generous planting box and rather complicated furniture. Below, two schemes which use plants flush with the floor. The basin for water plants, located in a New York city house, is an especially happy idea for replacing the otherwise necessary flower sink.

Richard Garrison



SECTION THRU WINDOW



GEORGE KOSMAK, RUTH GERTH & ASSOCIATES, Architects and Designers.

Ezra Stoller

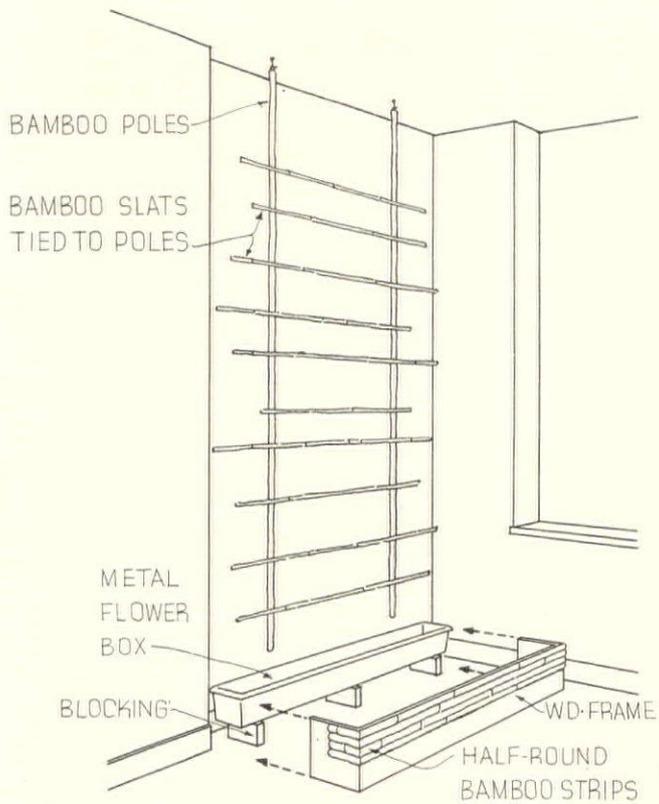


CARL KOCH, Architect, Belmont, Mass.

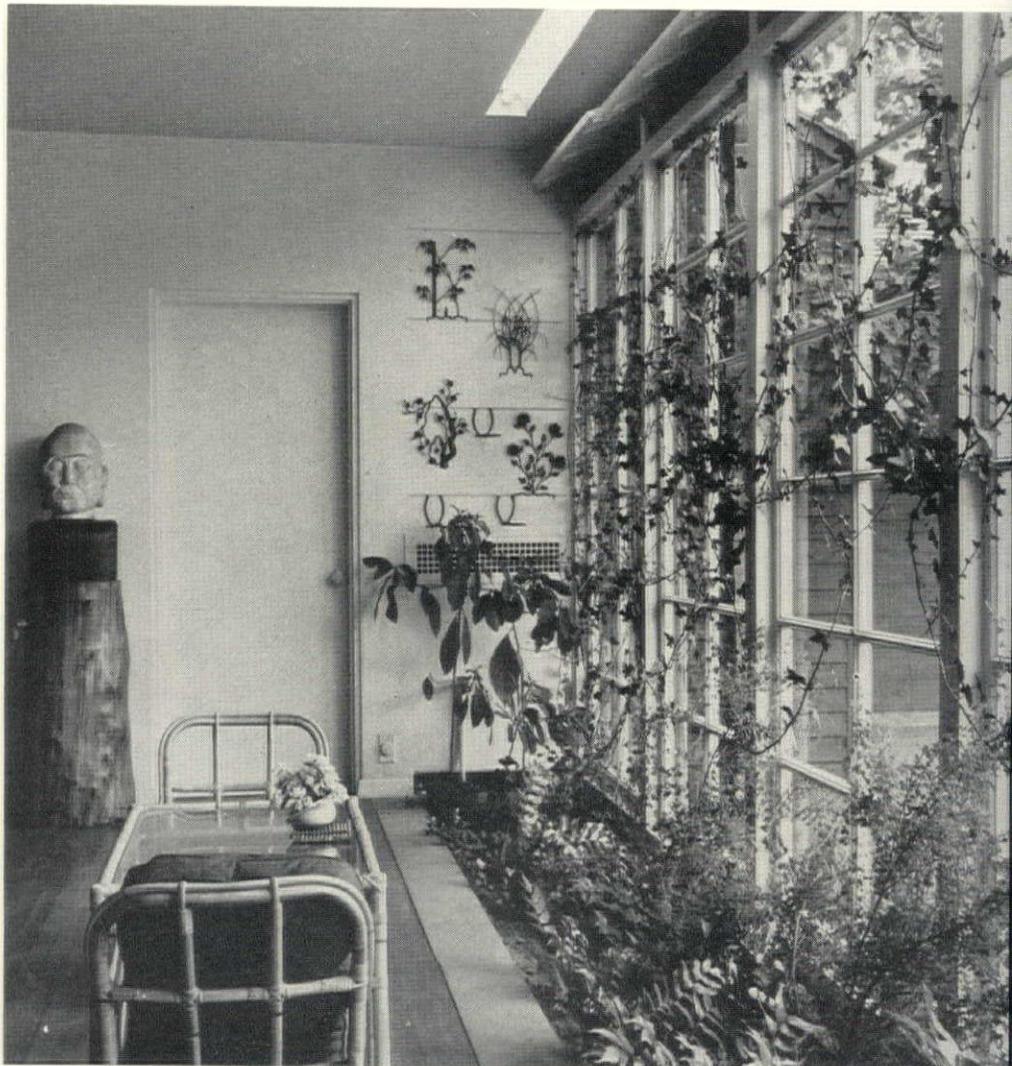
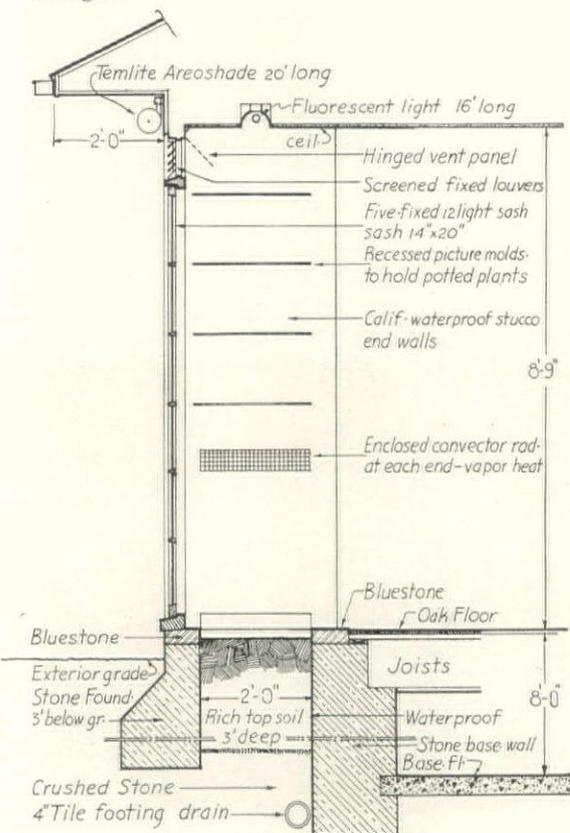
INTERIOR PLANTING



SANDERS & BRECK, Architects; SMITH-MILLER, Associate, New York, N. Y.



The bamboo trellis illustrated above shows a scheme that could easily and inexpensively be applied in any modest apartment. The metal box is set up on blocks and covered with a facing of bamboo. The arrangement below is more elaborate, the box having been incorporated into the structure of the house, with plants set in front of a very large window that faces south. To judge from the luxuriance of the foliage, there would seem to be no difficulty with such planting arrangements where there is an abundance of sunlight.



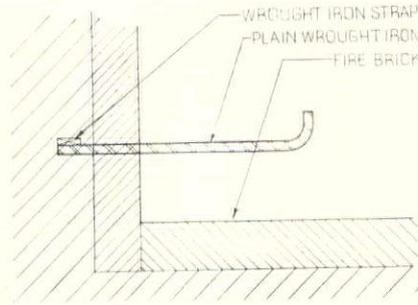
VICTORINE & SAMUEL HOMSEY, Architects, Wilmington, Del.

FIREPLACE TREATMENTS



EDWARD D. STONE, Architect, New York, N. Y.

Ezra Stoller

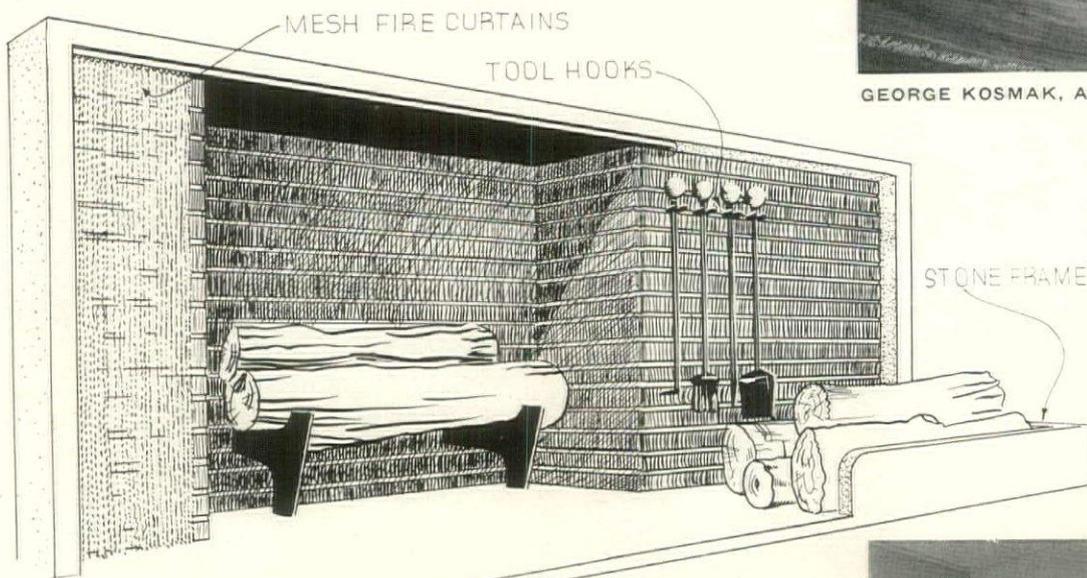


Richard Garrison

The examples on this page show several variations on a common theme. The built-in andirons have the distinct advantage of staying put while the fire is being made. Those at the right depart completely from the ordinary conception, holding the logs teepee-fashion for what the architect claims is a better and more economical fire. The drawing below shows everything built in: andirons, fire irons, the steel mesh curtain and woodbox.

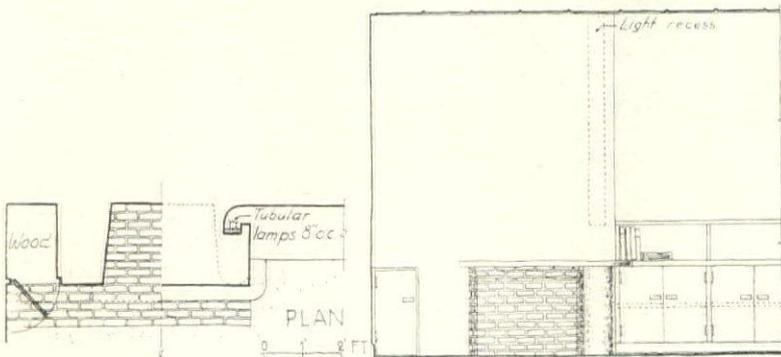


GEORGE KOSMAK, Architect, New York, N. Y.



RICHARD M. BENNETT, Architect, New York, N. Y.

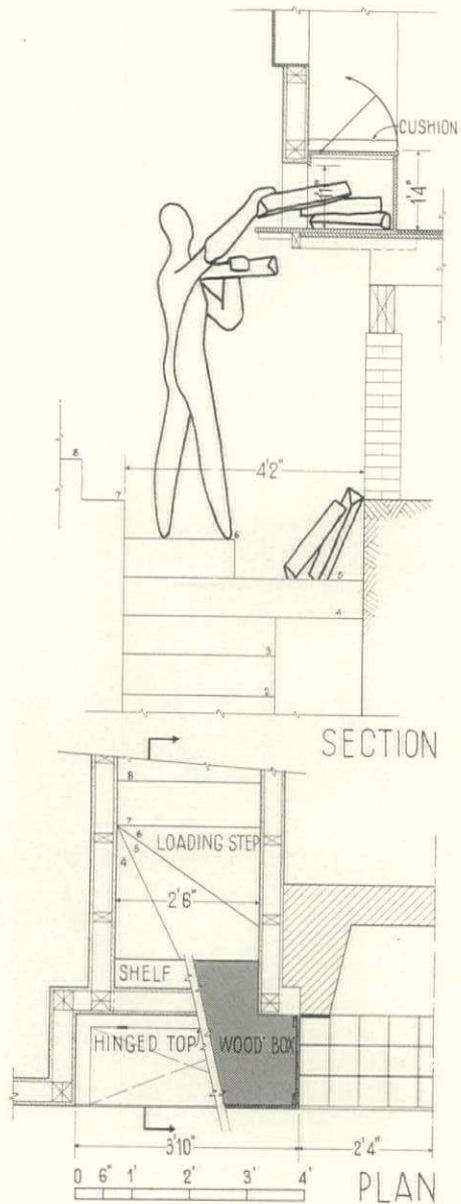
Arthur C. Haskell



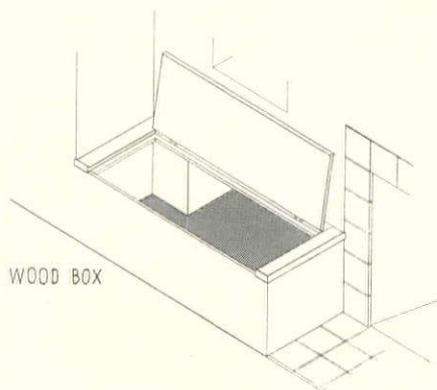
ROYAL BARRY WILLS, Architect, Boston, Mass.



WOODBBOX



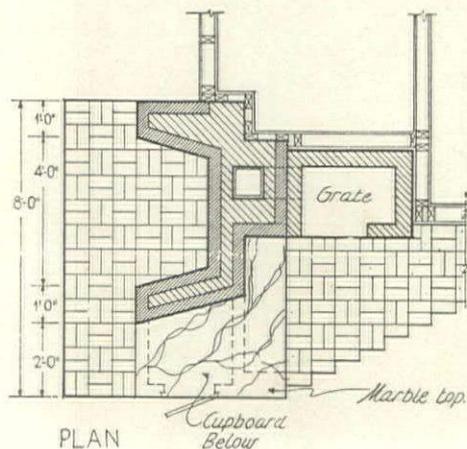
HUGH S. MORRISON, Designer, Hanover, N. H.



The modest interior above conceals a very useful device, as simple as it is ingenious. The bench by the fireplace has a hinged top and is used as a woodbox. Due to its placing in relation to the cellar stairs, the box can be fed directly from outside the room, an arrangement clean and convenient. The cooking fireplace is rising in popularity as an adjunct to outdoor living. As a reminder of its usefulness within the house the example below has been included. Built into a shooting lodge in South Carolina, it contains all the necessary equipment for broiling or roasting game.

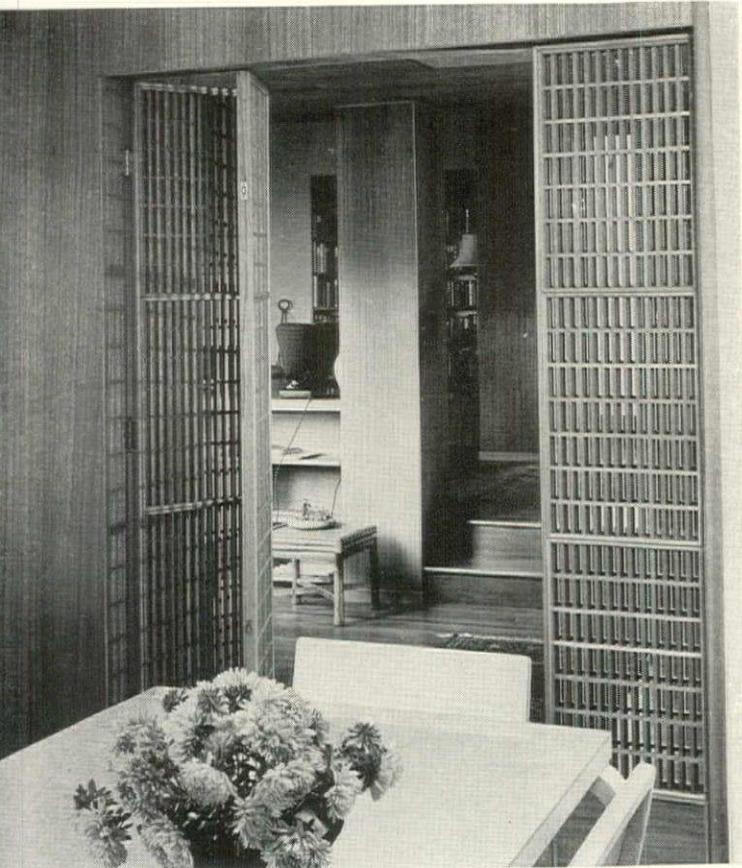
COOKING FIREPLACE

Jessie Tarbox Beals



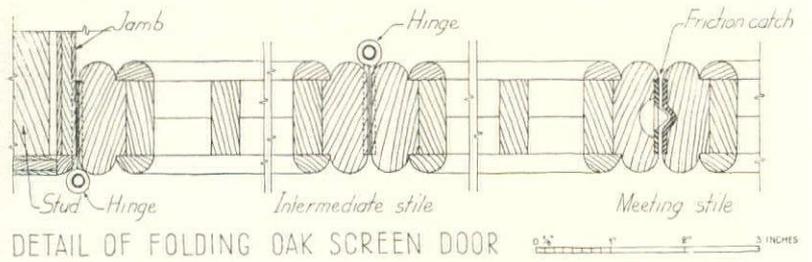
VICTORINE & SAMUEL HOMSEY, Architects, Wilmington, Del.

FOLDING SCREEN



MICHAEL GOODMAN, Architect, Berkeley, Calif.

The open wood screen in the picture above is used in place of solid doors to divide a dining room from an adjoining entrance hall, adding a decorative note to the design and maintaining a feeling of openness while affording sufficient privacy for the room. The bookcase, right, creates an entrance vestibule in the corner of a living room without cutting down the apparent size of the room. The chest, below, acts as a railing for the stairway and is useful for storing silver, china, and table linen for the dining room in which it is located. A cloth curtain is used to close the upper part of the opening when this is necessary.



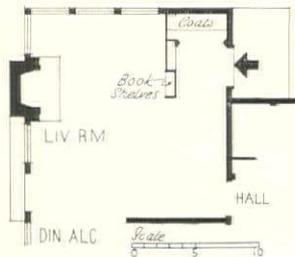
DETAIL OF FOLDING OAK SCREEN DOOR

BOOKCASE WALL

Roger Sturtevant

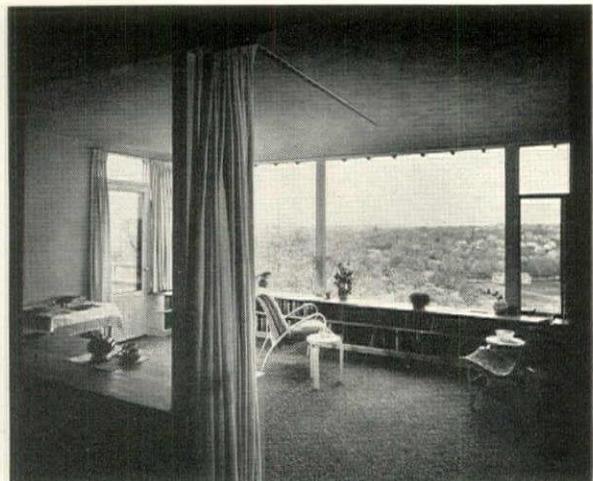


GARDNER A. DAILEY, Architect, San Francisco, Calif.



CABINET-STAIR RAIL

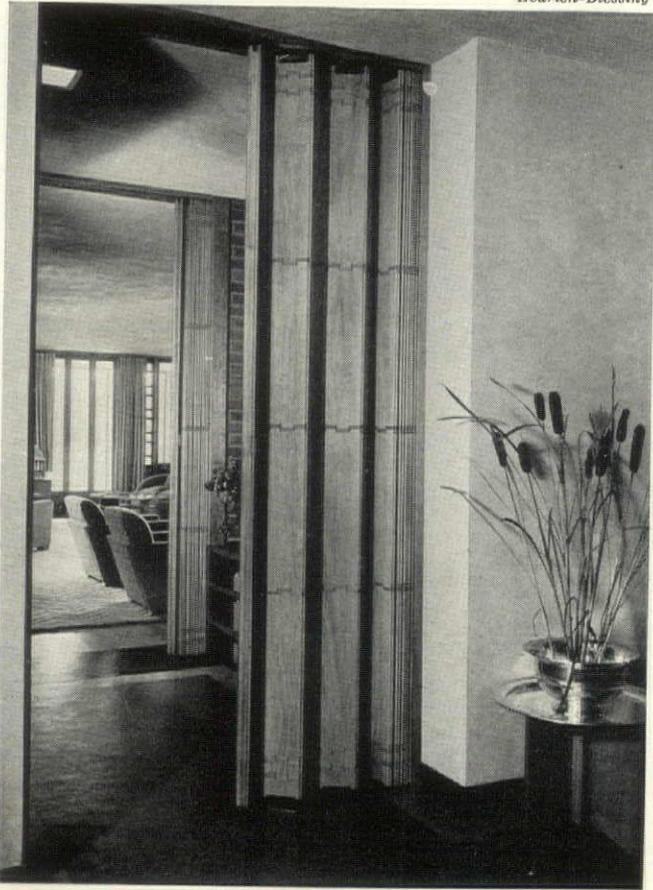
Era Stoller Photos



CARL KOCH, Architect, Belmont, Mass.

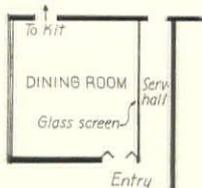
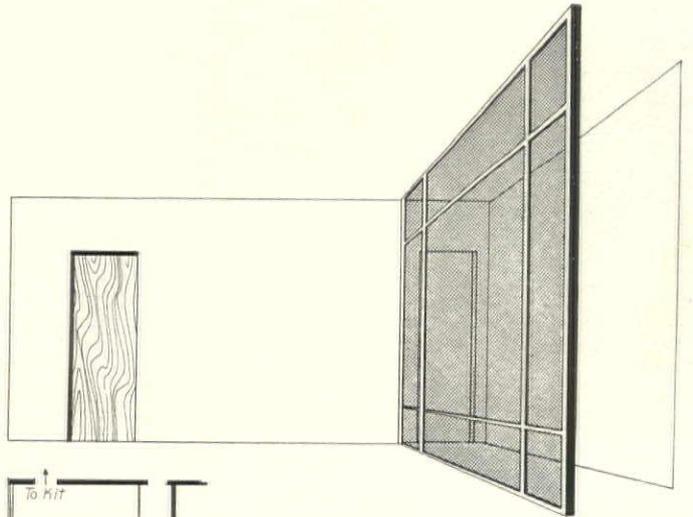
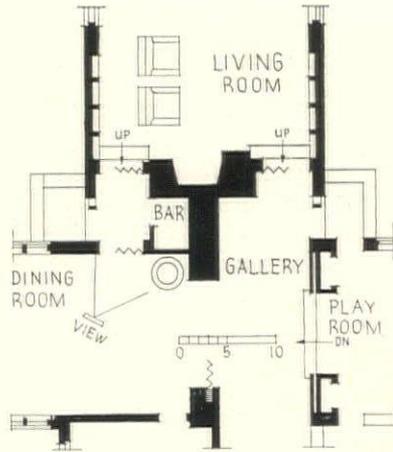
FOLDING PARTITION

Hedrich-Blessing

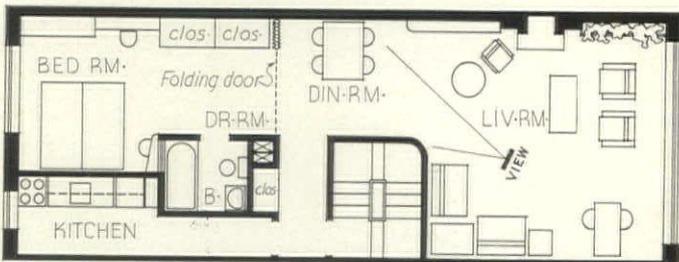


WILLIAM F. DEKNATEL, Architect, Chicago, Ill.

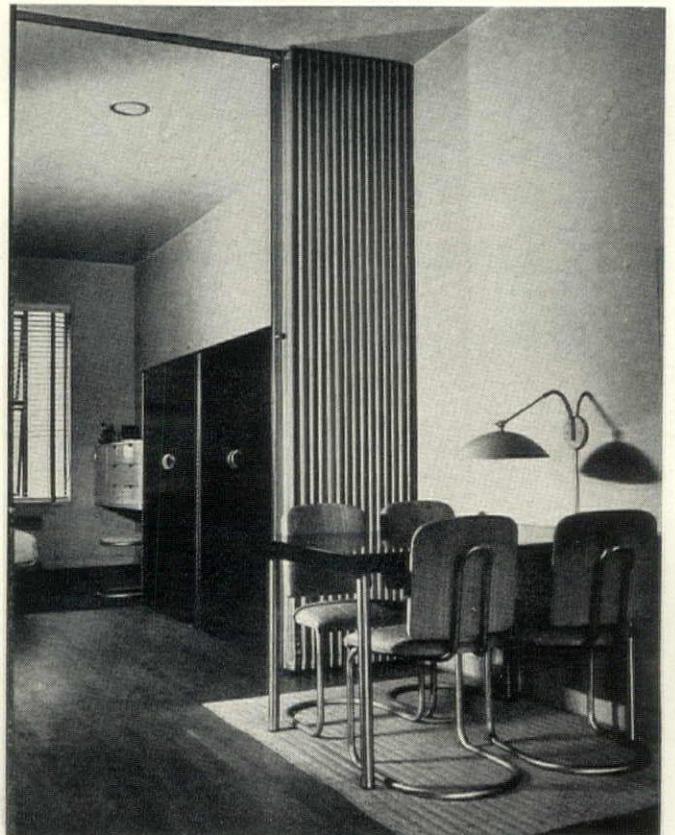
The folding-sliding partitions above, used to divide living and dining rooms and enclose a small bar, are a stock type made of thin wood panels; the type shown below is a manufactured unit consisting of a fabric-covered metal frame that provides a rigid, sound resisting partition which, when folded, resembles a curtain.



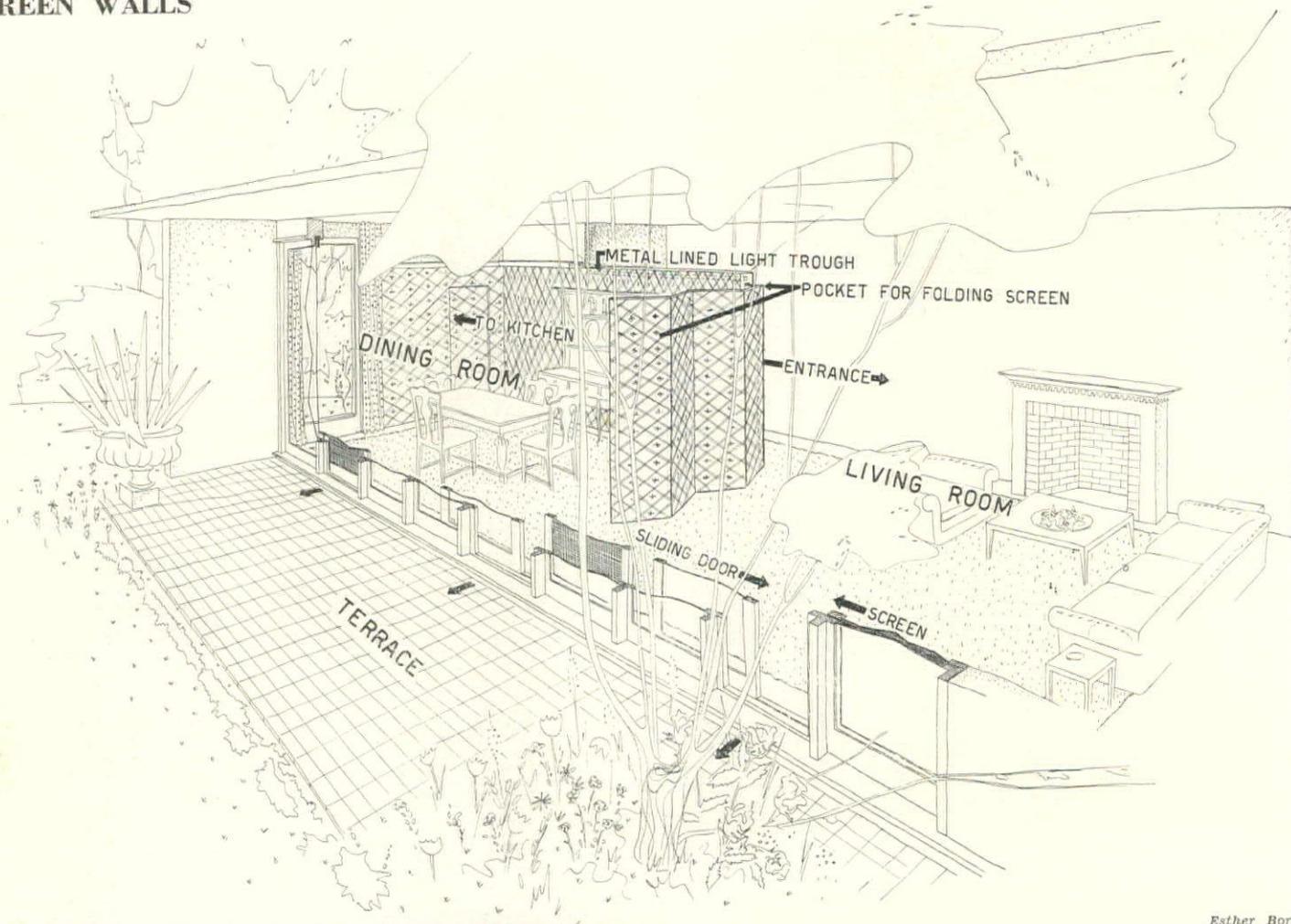
MARIO CORBETT, Architect.



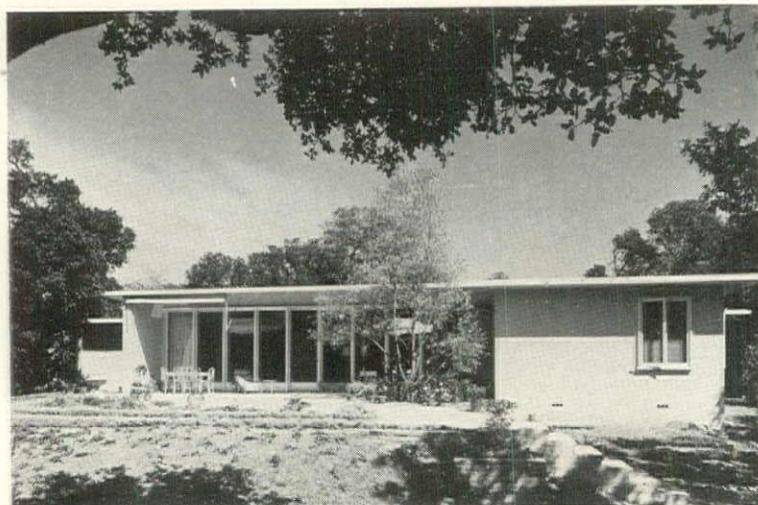
SANDERS & BRECK, Architects, New York, N. Y.



SCREEN WALLS



Esther Born



HERVEY PARKE CLARK, Architect; JAMES KEMBLE MILLS, Decorator, San Francisco, Calif.



PLANTING—STORAGE UNIT

Mary Thiry

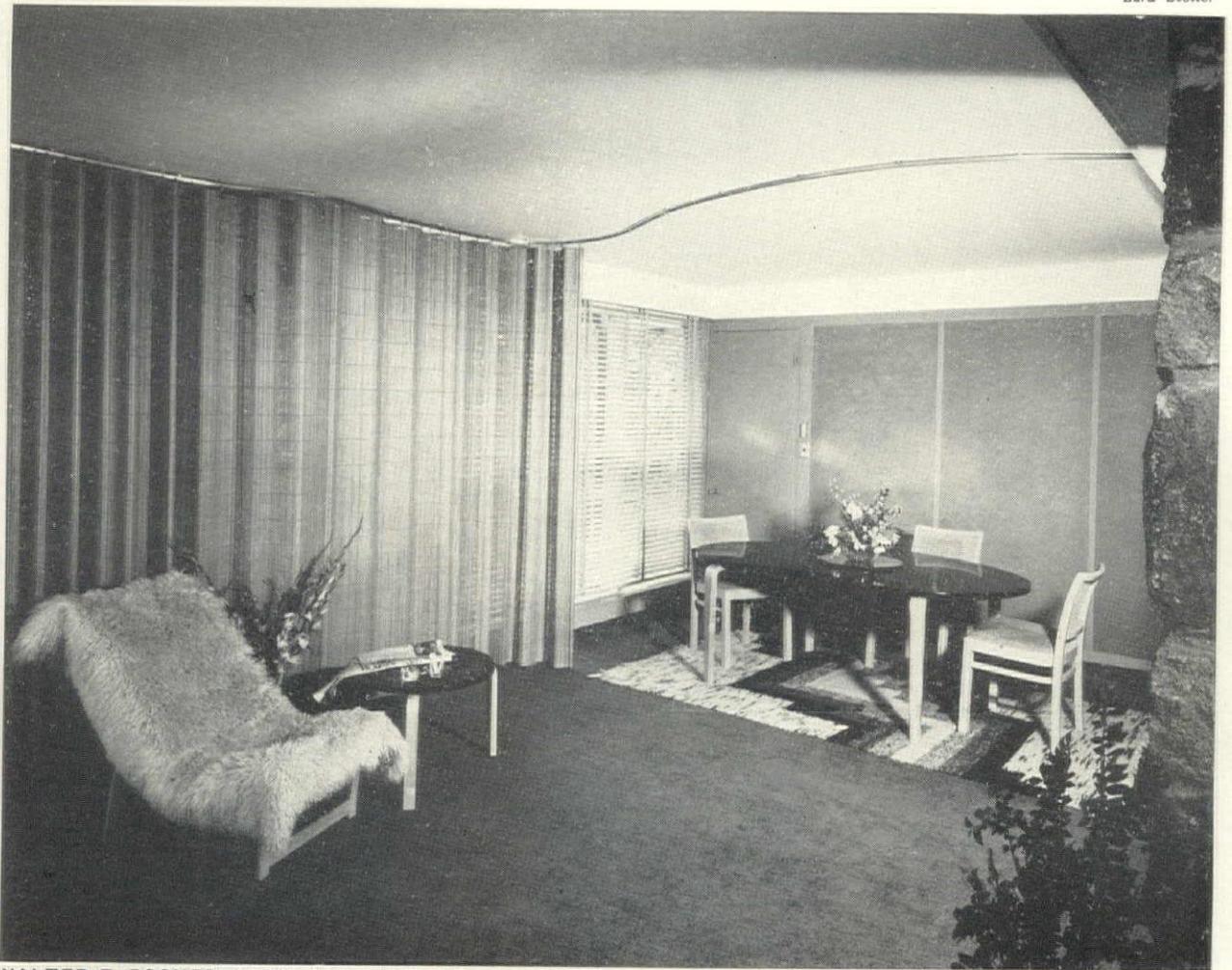
In most rooms where a screen is used to provide varying degrees of separation between one part and another, this element is treated as a distinct unit. The arrangement shown above, however, makes good use of a gray-green wall-paper to tie in the screen with the walls of the dining space. As seen from the living room, the pattern of the paper offers a contrast to the plain walls. Shown at the right is a low partition which serves a variety of purposes. At the top is a plant pocket; the end has storage space for trays and card tables, and the center section (reached from the dining room) contains cabinets for linen and silver.

PAUL THIRY, Architect, Seattle, Wash.



WOVEN WOOD SCREEN

Ezra Stoller



WALTER F. BOGNER, Architect, Cambridge, Mass.

DINING ROOM STORAGE UNIT

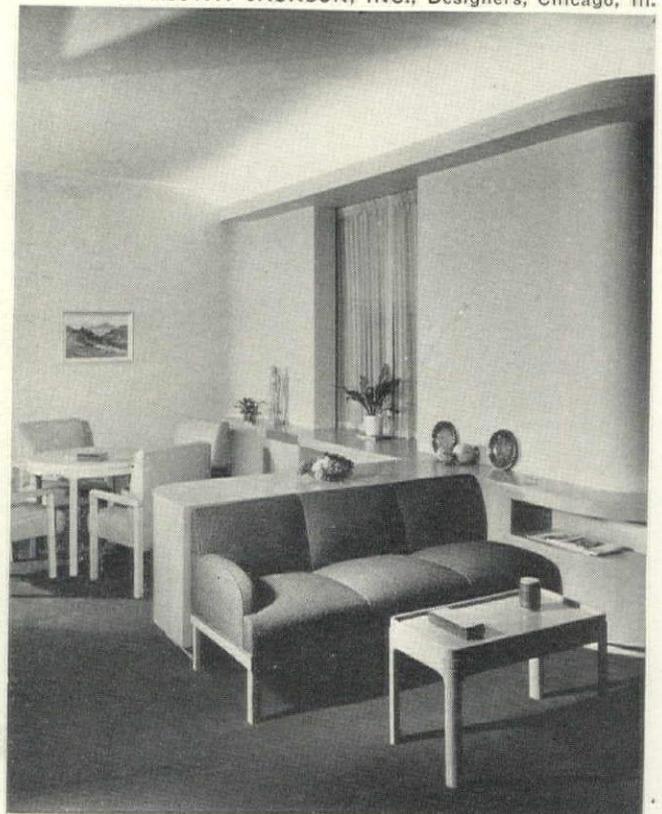
Separation of living and dining is merely indicated in this interior, a low cabinet being used for the purpose. There is storage space in this unit for liquor, linen and glassware. Especially commendable is the use of trays as shelves in the glass cupboard.

To create interest in both living and dining areas, the architect selected woven wood strips for the screen and installed a curved ceiling track. Depending upon the position into which the screen is moved, the shapes of both rooms can be varied considerably.

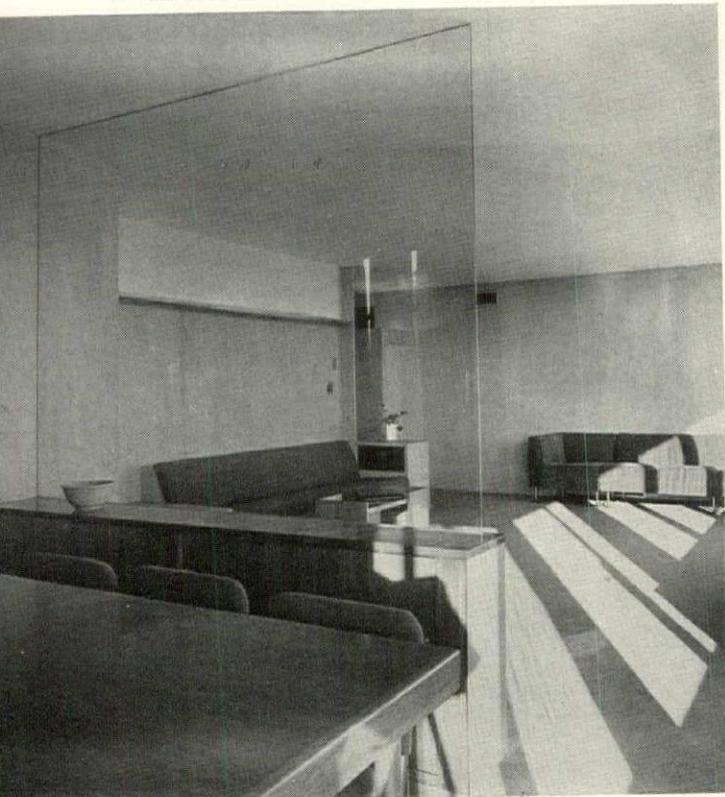
G. McSTAY JACKSON, INC., Designers, Chicago, Ill.



Chicago Architectural Photo. Co. Photos



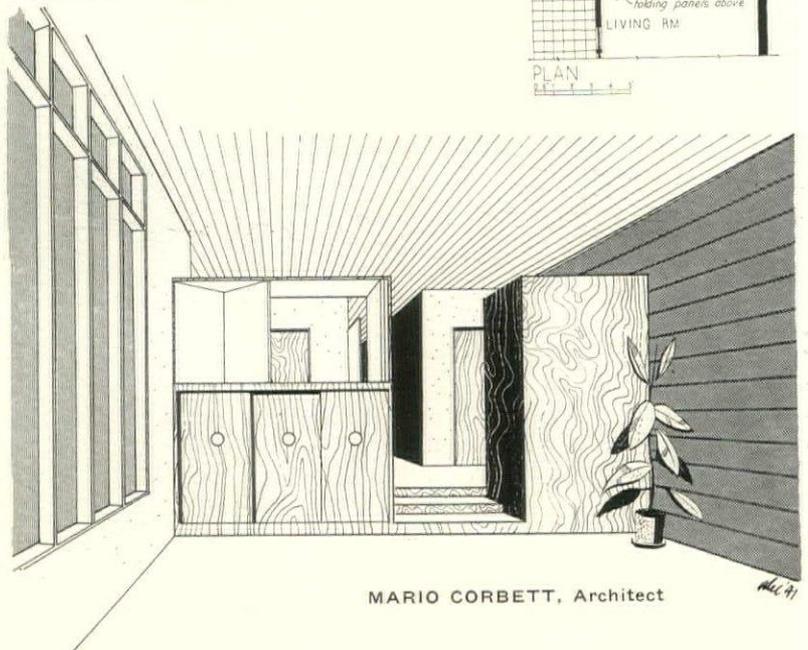
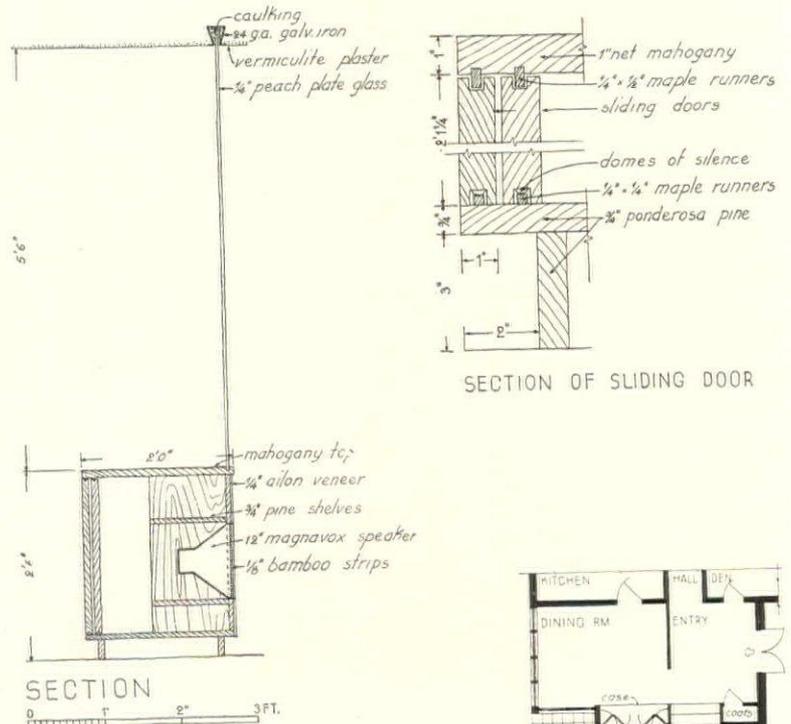
LIVING-DINING ROOM SCREENS



RAPHAEL S. SORIANO, Designer,

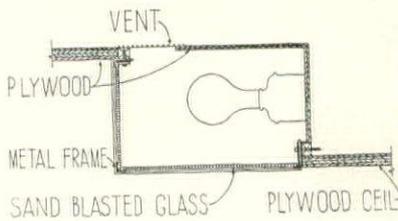
Julius Shulman

The drawing at the right represents a compromise between the architect's desire for maximum spaciousness in a small house and the client's wish for separation between living and dining rooms. The result as shown is a series of fitted cases above which are folding doors. An advantage over the floor-to-ceiling folding partition is the gain in storage space. Above, a fixed plate glass panel between living and dining areas. The idea again suggested is a combination of openness and separation.

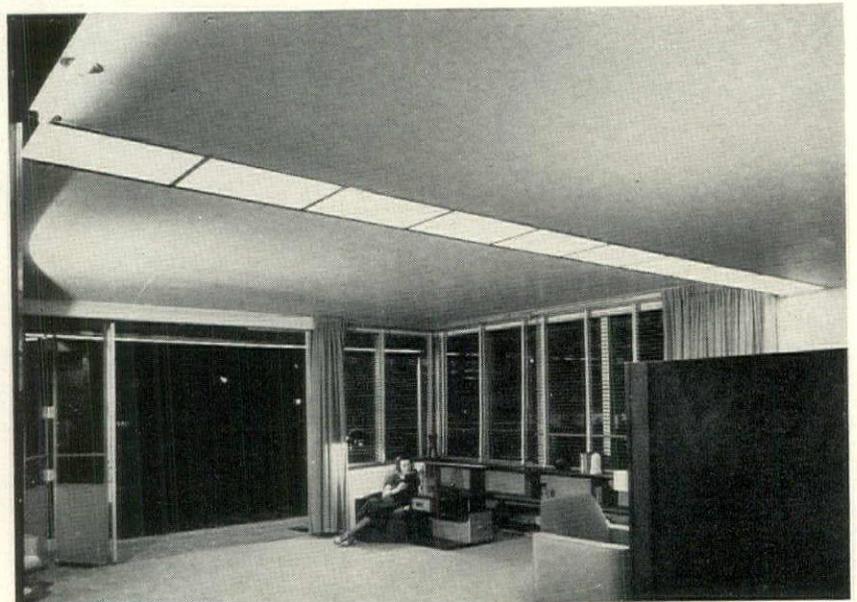


MARIO CORBETT, Architect

CONTINUOUS LIGHTING UNIT



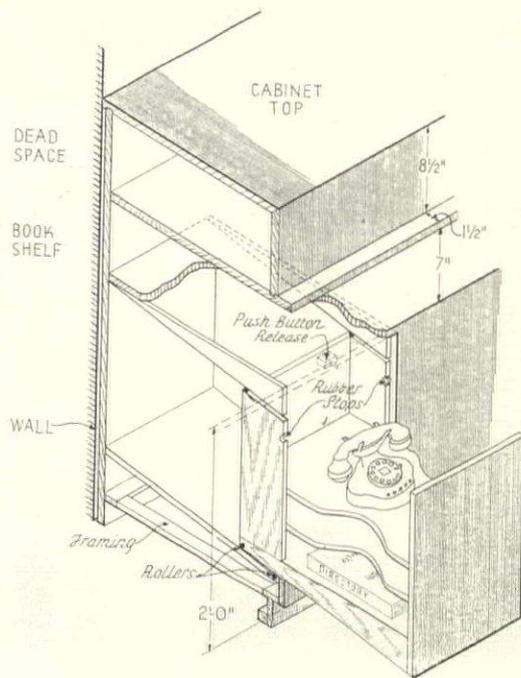
The living room shown here has a step-down ceiling, breaking up the space into high and low sections. As indicated by the drawing, a continuous lighting unit at the point where the break occurs is effective in accenting the change in levels, since it illuminates the high ceiling and leaves the lower one dark. Relamping is done by simply pushing up the loose panes in the soffit frame.



RICHARD J. NEUTRA, Architect, Los Angeles, Calif.

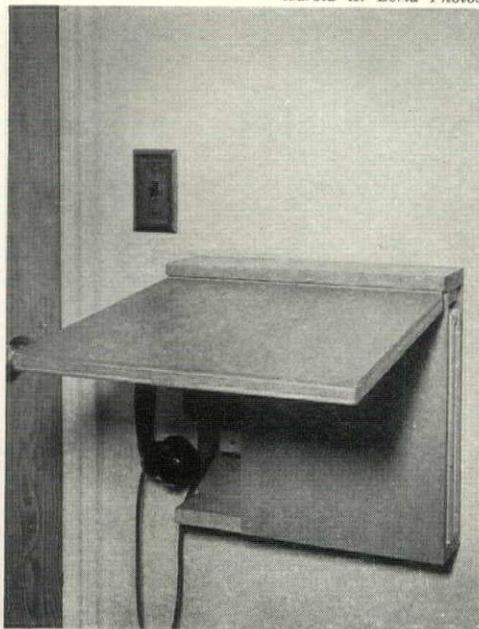


TELEPHONE CASE AND DESK



Chicago Architectural Photo. Co.
G. McSTAY JACKSON, INC., Designers, Chicago, Ill.

Harou A. Berla Photos



Two arrangements for telephones are shown here. Above, a drawer containing the instrument and shelves for directories, which rolls out when a button is pushed. Another good feature is the shallow counter for big books and magazines. Below, a telephone desk, built with a shelf mounted on a collapsible metal bracket. At the rear is a slot for the telephone book.

WILLIAM WILDE, Architect; SYLVIA WILDE, Associate Designer, Westfield, N. J.

ALCOVE WITH RETRACTABLE LAMP

Chicago Architectural Photo. Co.



G. McSTAY JACKSON, INC.

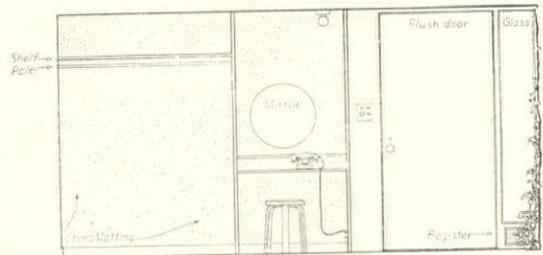
This space is part of a large play-room, and a bar is located under the counter at the extreme left. Most interesting feature is the hanging lamp, which can be pulled up to the ceiling if a change in the type of illumination is desired.

OPEN CLOSET

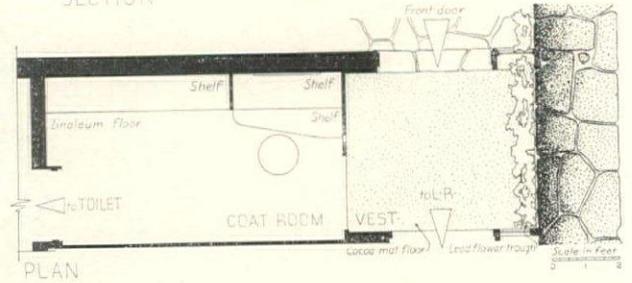
Ezra Stoller



WALTER F. BOGNER, Architect, Cambridge, Mass.



SECTION



PLAN

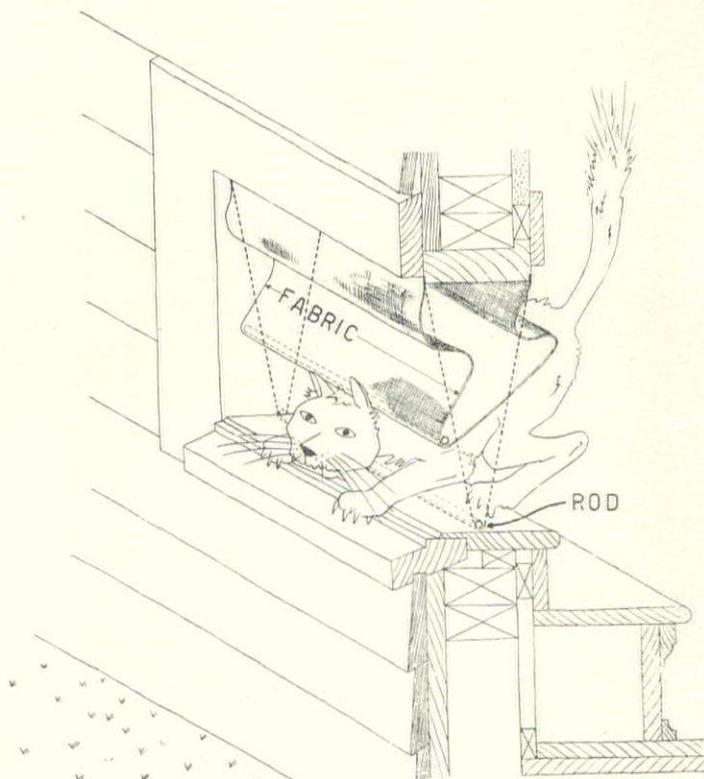
The space shown adjoins the entrance vestibule of a country house, and has a dressing and telephone table, and a rack for coats and hats. Where living habits are not too formal the openness of such a scheme should prove entirely acceptable. The perforations in the upper part of the screen wall allow the light in the closet to illuminate the vestibule.

At the left, a drawing of a device which permits the owner's cats to let themselves in and out without disturbing anyone. The architects comment that the weighted cloth "door" is quite effective in keeping out the wind. Below, an entrance vestibule which makes effective use of contrasting materials. The exposed shelves are inconspicuous and serviceable.

DOOR FOR PETS

VESTIBULE

C. V. D. Hubbard



IDES VAN DER GRACHT & WALTER H. KILHAM, JR.,
Associated Architects, New York, N. Y.



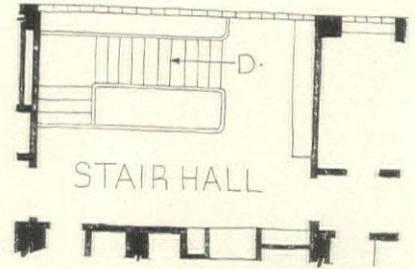
OSCAR G. STONOROV, Architect, Philadelphia, Pa.



PAUL DOERING, Designer, New York, N. Y.

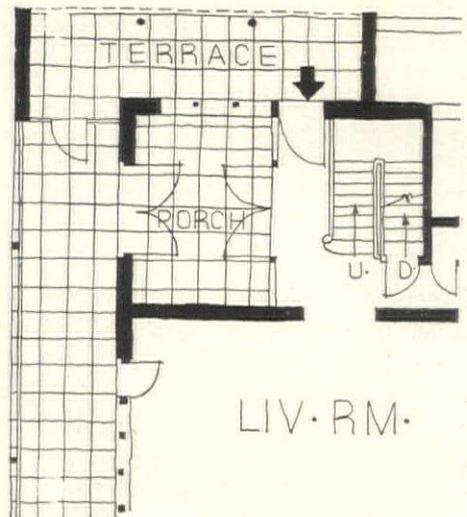
Robert M. Damora

STAIR HALLS



The role played by glass in establishing the character of the contemporary house needs no comment. The examples on this page provide two dramatic instances of the manner in which translucent glass may be used, in both block and sheet form. In the stair hall, a space two stories in height has been treated as a unit. The hall below makes use of fluted glass to provide an abundance of light without loss of privacy.

OFFICES OF W. L. PEREIRA, Architect, Chicago, Ill.



Hedrich-Blessing

OUTDOOR FIREPLACES



WILLIAM WILSON WURSTER, Architect, San Francisco, Calif.

Roger Sturtevant



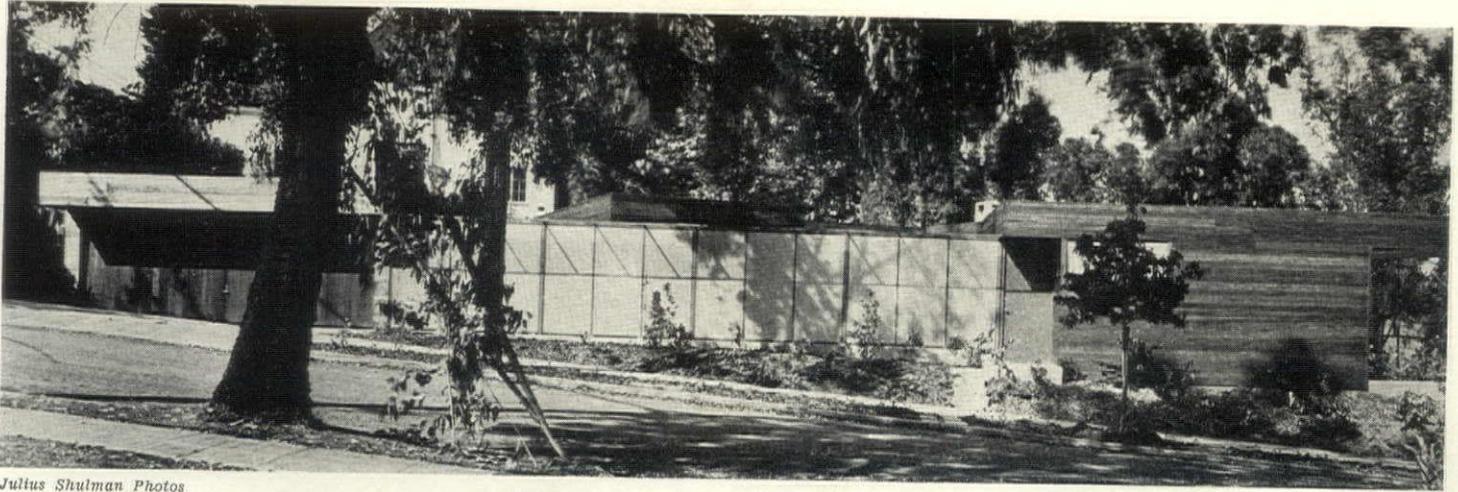
VICTOR CIVKIN, Architect, Bridgeport, Conn.



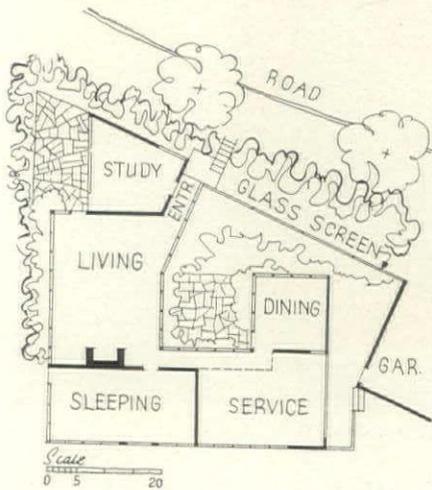
GEORGE KOSMAK, Architect, New York, N. Y.

These three outdoor fireplaces vary widely in use and treatment. The example directly above, for instance, is primarily for cooking. The photograph at the top of the page shows a successful attempt on the part of the architect to merge this unit in with the surrounding walls by a continuation of the wall material. At the right is a porch fireplace, a very shallow design with a large iron hood. The scheme is an excellent one where a maximum of radiant heat is desired.

TRANSLUCENT GARDEN WALL



Julius Shulman Photos



While exterior screens of transparent glass have been used occasionally, where a windbreak was required which did not shut off a view, the translucent wall used out of doors is not common. The main advantage would appear to be a decorative one, as plants can be effectively shown in silhouette against the bright background.



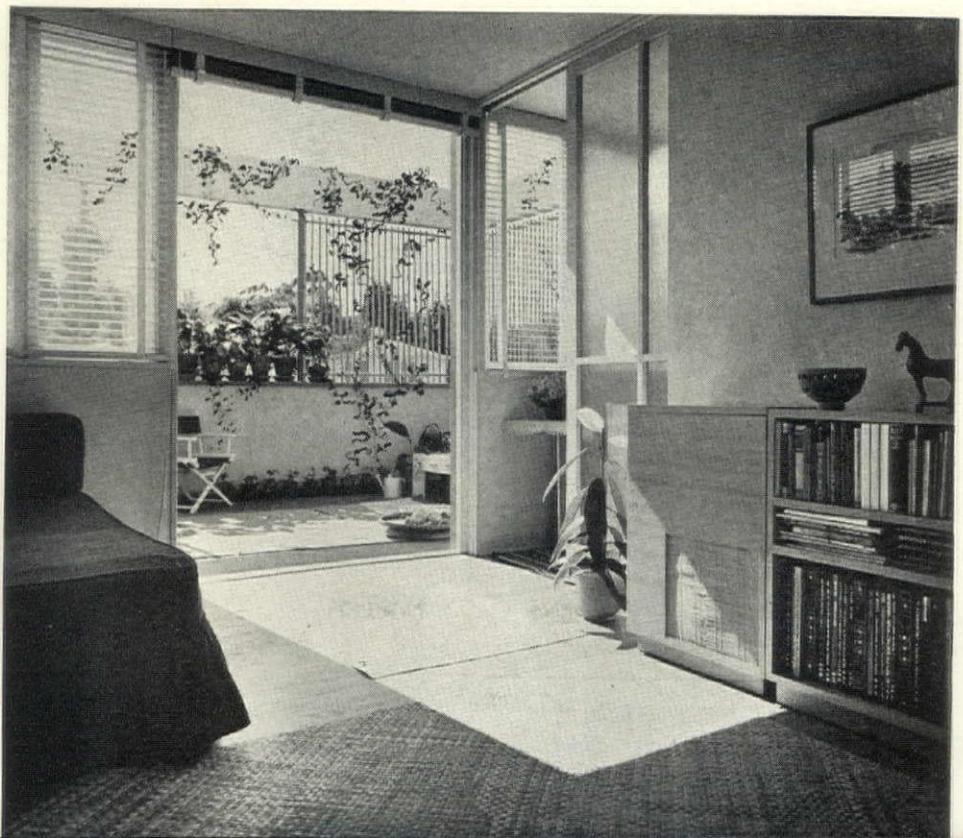
RAPHAEL S. SORIANO, Designer, Los Angeles, Calif.

SLIDING SCREENS

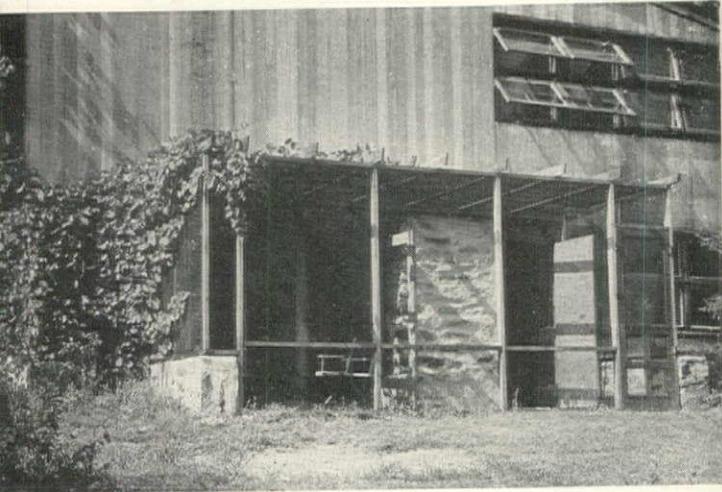
A very small apartment in which sliding doors play an important part. The larger of the doors can be used to create a wide opening between the living-bedroom and the terrace beyond. On the other wall is a sliding screen of Celloglass which closes off the dinette and kitchen.



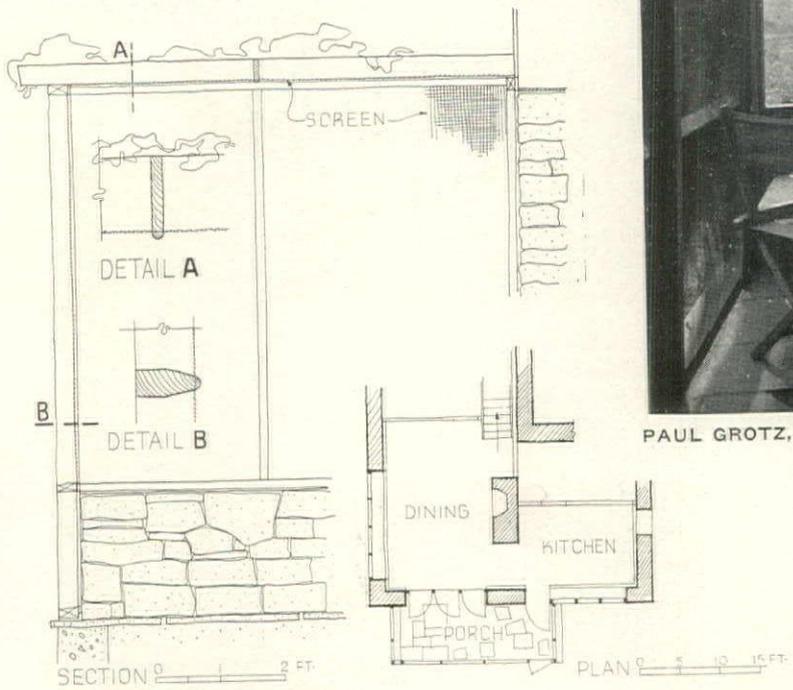
J. R. DAVIDSON, Designer
Los Angeles, Calif.



SCREENED PORCH



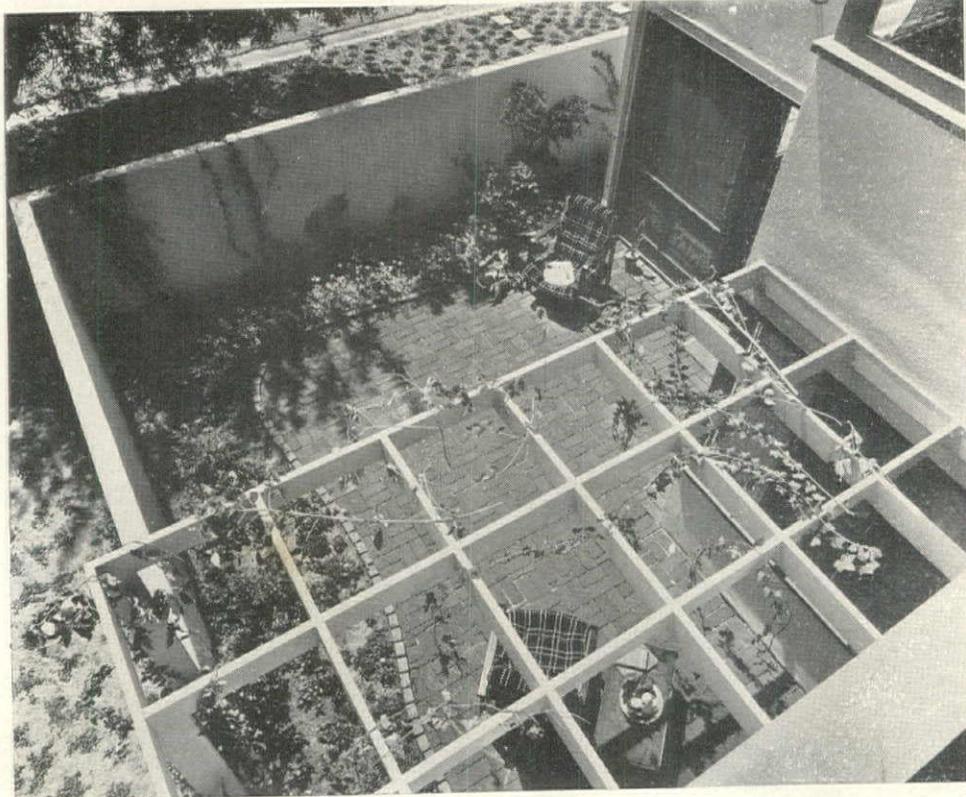
PAUL GROTZ, HENRY N. WRIGHT, Designers, New York, N. Y.



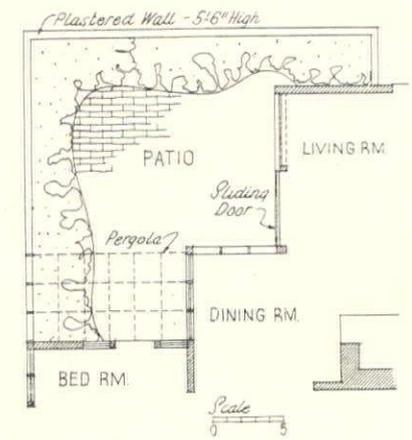
The pleasures of a room open to the sky have been traditionally expressed in the patio. A northern version of this scheme is shown above, where the screens of the porch have been extended to form its roof as well as walls. From a practical viewpoint the design has two great merits: it admits light to the adjoining room and it is a good solution for screening the large opening.

PATIO

Julius Shulman



A contemporary interpretation of the patio. There is a brick terrace with planting beyond its curved edges. The trellis gives textural interest, and when the vines are farther along, will provide shade as well.

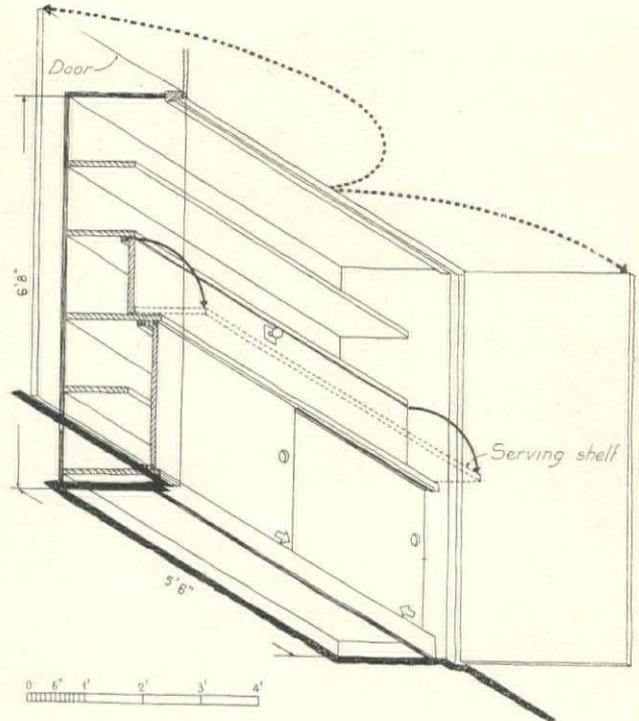


J. R. DAVIDSON, Designer, Los Angeles, Calif.

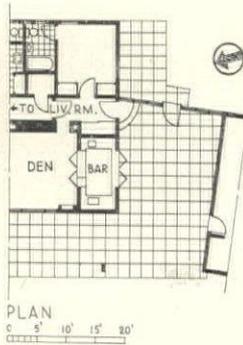
CLOSET BAR



SAMUEL G. WIENER, Architect, Shreveport, La.



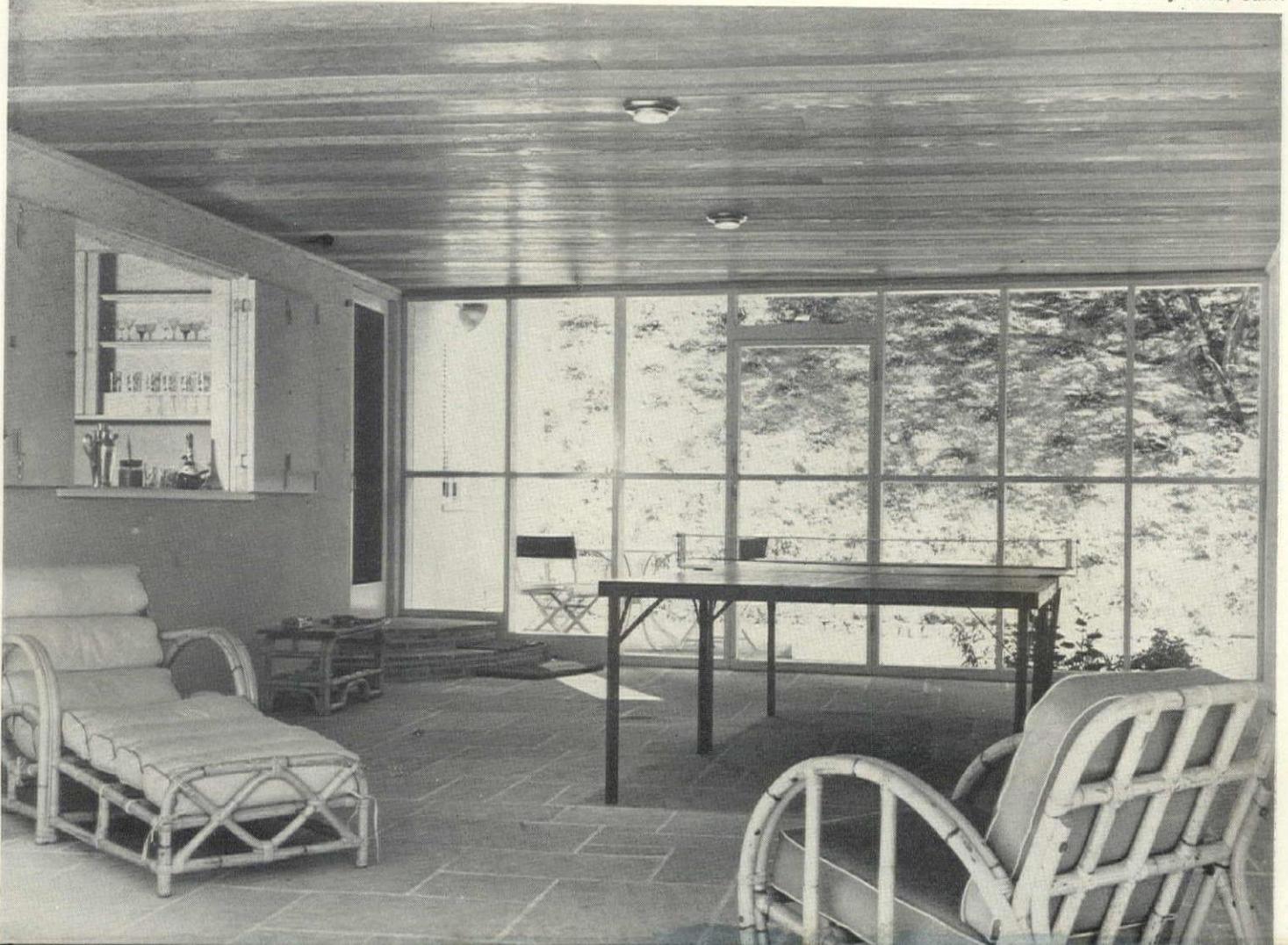
The simplest type of residential bar is that which occupies a large closet, as in the example above. Double doors open the full width of the recess, and a folding counter provides a work shelf for mixing drinks. The outdoor recreation room shown below is enclosed on one side by a glazed wall to keep out the weather, spans the space between the garage and the house. A two-way bar opens both into the porch and a smaller, inside den.



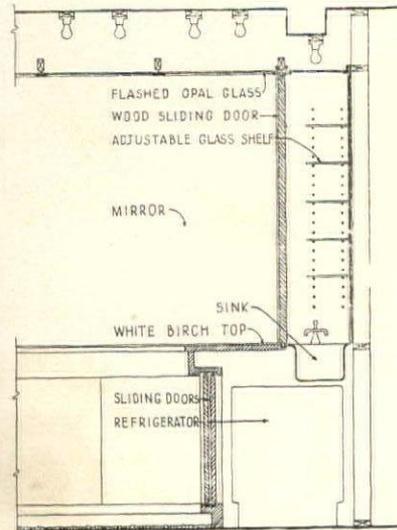
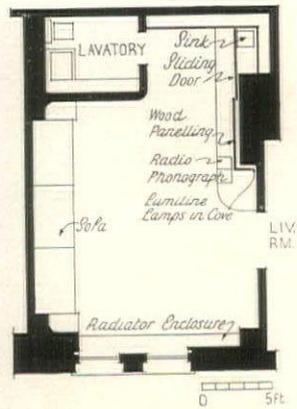
RECREATION PORCH

Julius Shulman

PAUL LASZLO, Designer, Beverly Hills, Calif.



ALCOVE BAR AND RADIO-PHONOGRAPH

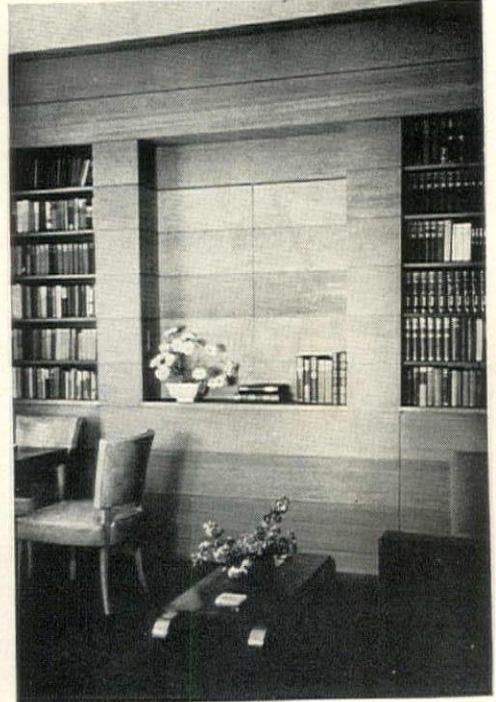
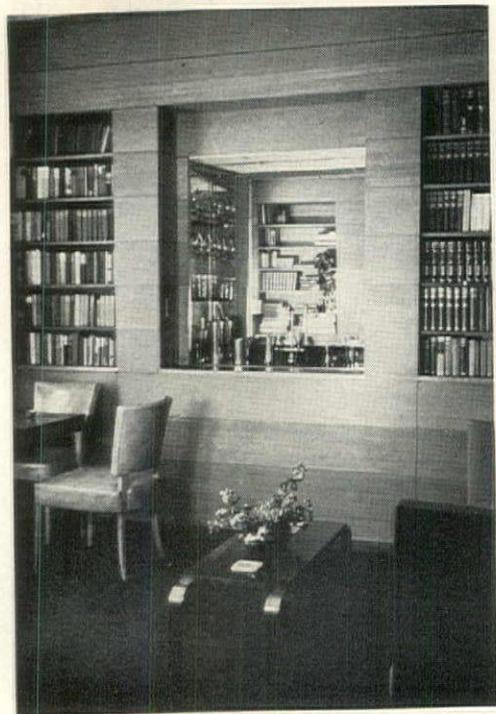
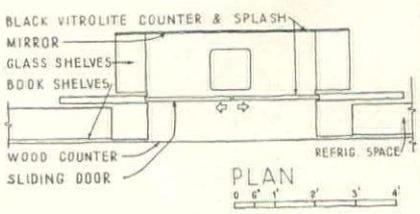
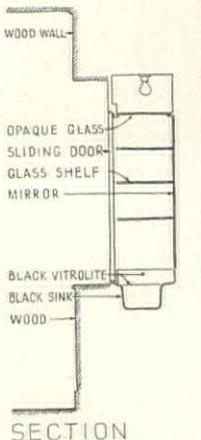


G. McSTAY JACKSON, INC., Designers, Chicago, Ill. Chicago Architectural Photo. Co.

The alcove unit above contains complete equipment for a working bar, including a sink and refrigerator, all concealed behind sliding doors. The balance of the cabinet is used for storage and to house a built-in radio-phonograph, with speakers located behind a cloth panel in the curved end. The bar below is concealed, when not in use, by doors which slide from behind the flanking bookshelves. The back of the unit is mirror glass, the shelf Vitrolite, and the top a lighted, diffusing glass panel.

BAR RECESS WITH SLIDING DOORS

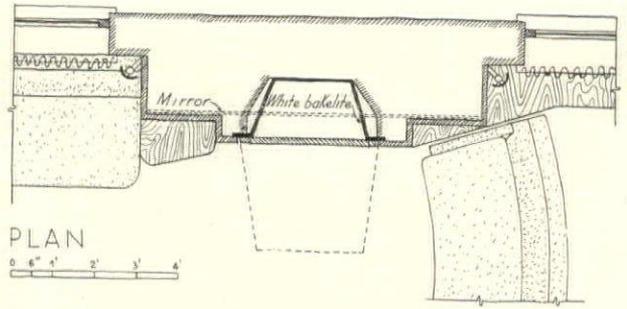
GARDNER A. DAILEY, Architect



LIQUOR CABINET



GEORGE DAUB, Architect, Philadelphia, Pa.



Richard T. Dooner Photos

COUNTER-TYPE BAR

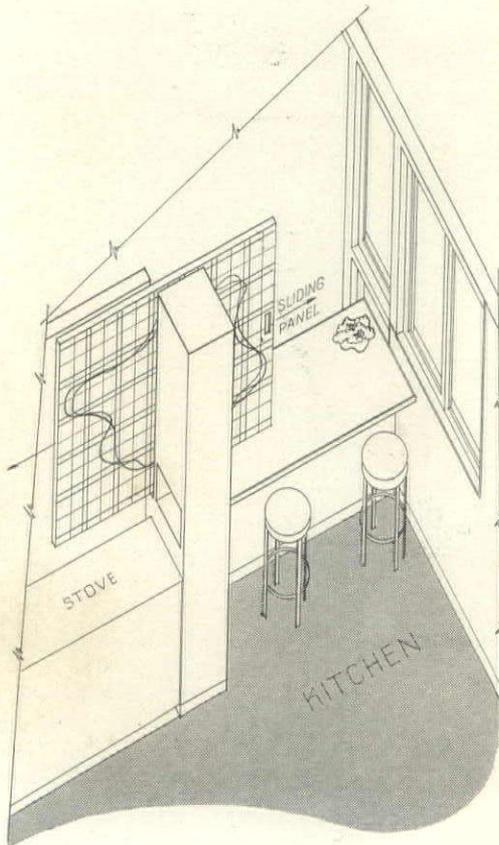
The liquor cabinet above was built into an existing imitation fireplace, providing a somewhat more functional focal point for the furnishings of a city apartment. The unit at the right is a full-fledged, counter-type bar located in an alcove off the dining room and lighted by a glass-block panel at one end. The bar at the bottom of the page does double duty as a serving counter between kitchen and dining rooms, is closed by a sliding door.



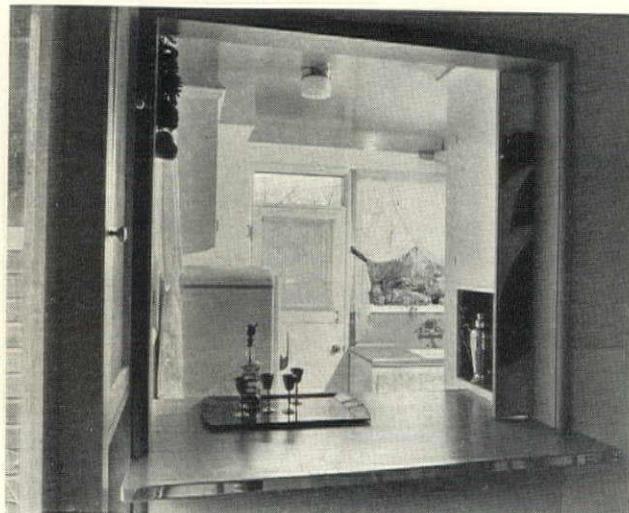
PAUL LASZLO, Designer, Beverly Hills, Calif.

Julius Shulman

BAR AND SERVING COUNTER



JOHN EKIN DINWIDDIE, Architect, San Francisco, Calif.



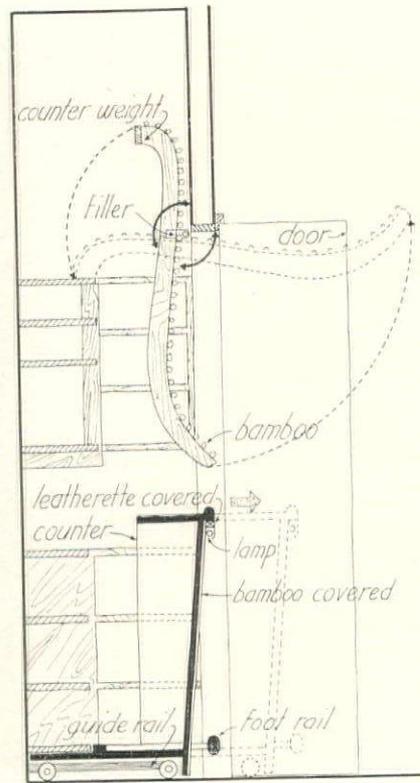
Roger Sturtevant

RECESSED BAR

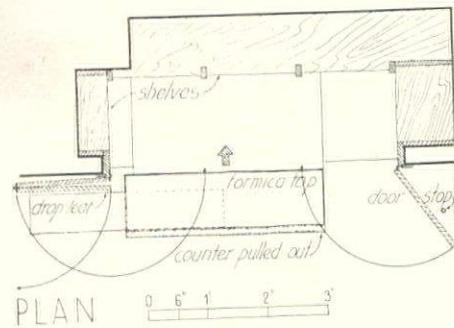


GRUENBAUM, KRUMMECK & AUER, Designers, New York, N. Y. *Robert M. Damora*

A tropical flavor is imparted to this recessed bar by the pivoted canopy of bamboo. The lower part rolls forward out of the recess to provide added depth. When not in use, the unit is covered by double doors.



SECTION 0 6" 1' 2' 3'



PLAN 0 6" 1' 2' 3'

BAR UNDER STAIR

Gomez

Space under a cantilevered stairway is here utilized for a generous counter-type bar complete with stools and footrail. The unit is located in a basement game room.

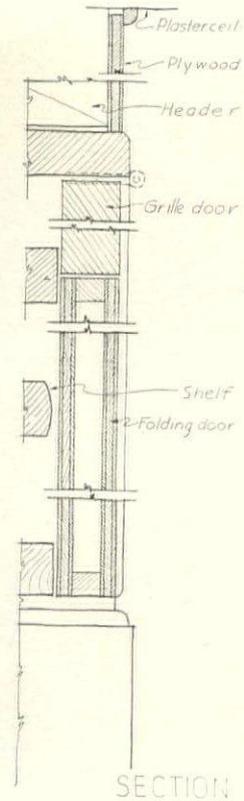


E. C. LAMARCA & W. BLAGOVESTCHENSKY, Architects

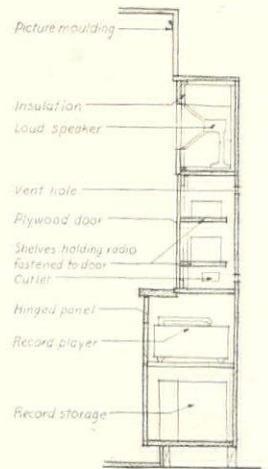
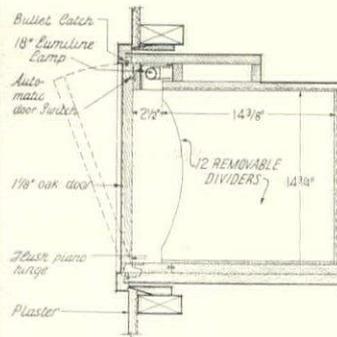
RADIO PHONOGRAPH



MICHAEL GOODMAN, Architect, Berkeley, Calif.



RECORD CABINET



RADIO PHONOGRAPH



Chicago Architectural Photo. Co.
G. McSTAY JACKSON, INC., Designers, Chicago, Ill.

Built-in radio-phonograph equipment is almost a design "must" for the modern house, if only because most of the standard portable equipment is housed in cabinetwork of such poor design. The cabinet at the top of the page uses double bi-fold doors to cover both instruments and storage shelves for record albums, a carved wood screen to conceal the speaker. Directly above is a record storage cabinet with a door which acts as a shelf for opening albums and its own lumiline light, at right a radio and speaker located in a bookcase, with pivoted drawer for phonograph below.

IDES VAN DER GRACHT AND WALTER H. KILHAM, JR., Associated Architects, New York, N. Y.

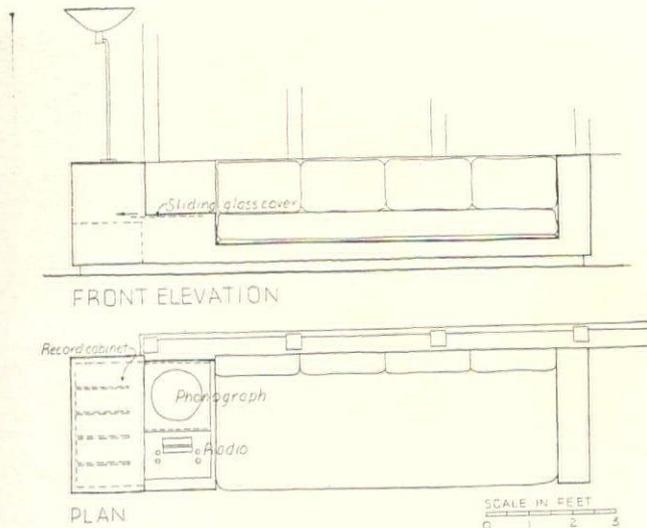
TELEVISION CABINET



JOHN VASSOS, Designer, Norwalk, Conn.

Richard Averill Smith

The picture above shows a combined radio, phonograph, and television installation which was exhibited at the New York World's Fair. Note tilting tuning panel, a good solution of the problem of what to do about knobs which may change their position if obsolete equipment is replaced. The radio-phonograph alongside the couch in the picture at the right (detail drawings above picture) is covered by a plate glass panel which slides back under the convenient record storage cabinet. Below is a bookcase fitted with horizontally-sliding, roll-back doors which also conceal a recess for a standard radio-phonograph cabinet.



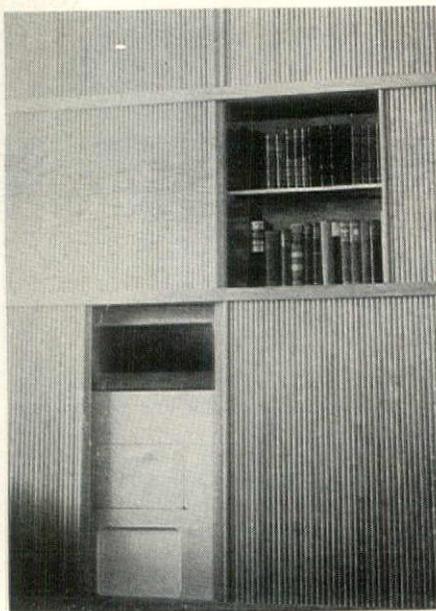
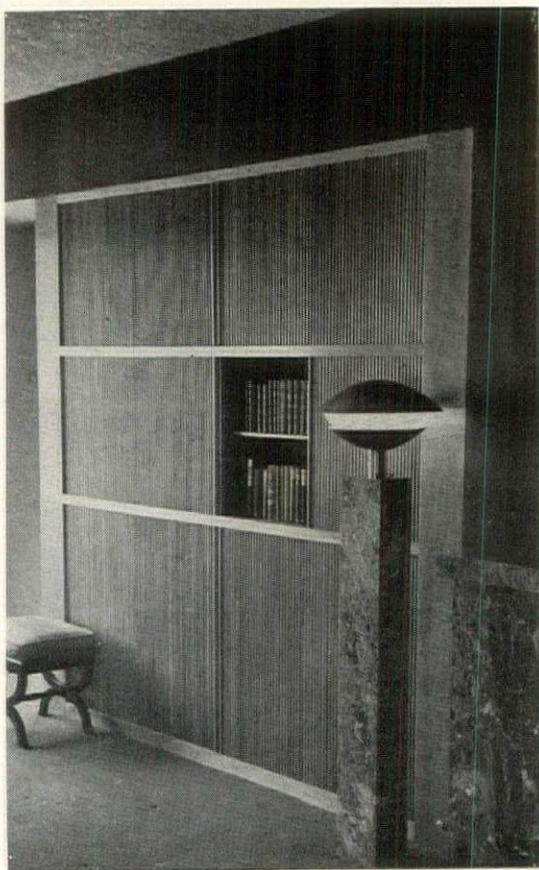
MUSICAL END TABLE

Julius Shulman



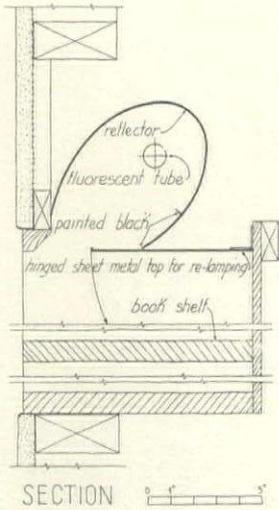
RAPHAEL S. SORIANO, Designer, Los Angeles, Calif.

COVERED BOOKSHELVES

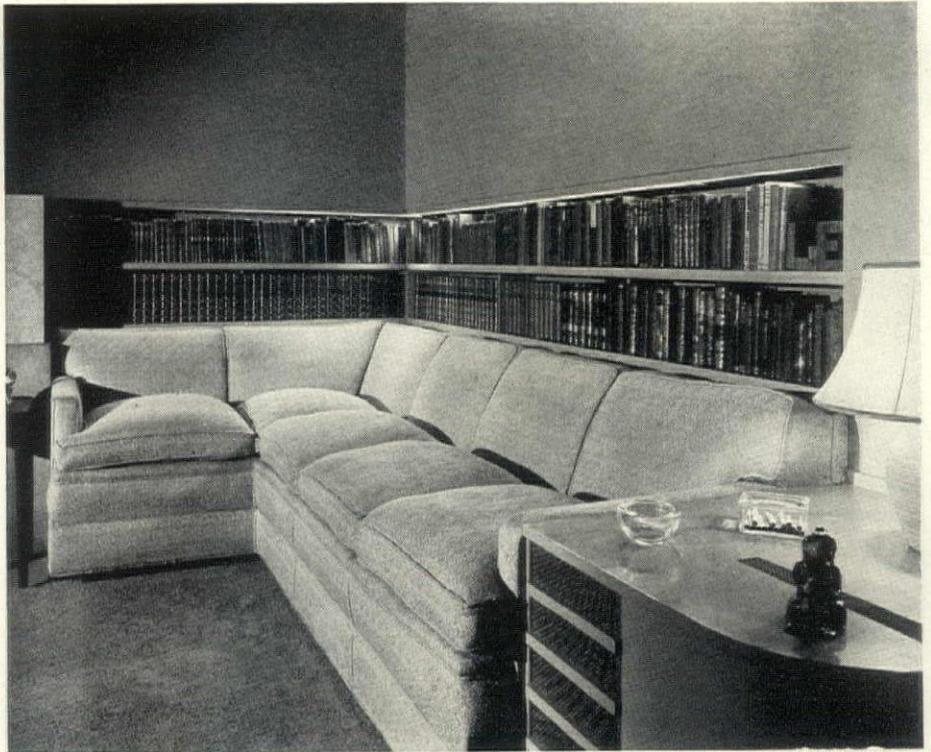


PHILIP L. GOODWIN,
Architect, New York, N. Y.

RECESSED BOOKSHELVES



Bookshelves recessed in the wall have no top surface to collect dust and tempt disorderly overflow storage. Like all wall shelves, these are also conveniently out of the reach of small children, but the deep couches may make them somewhat difficult for adult use.



JAMES F. EPPENSTEIN, Architect, Chicago, Ill.

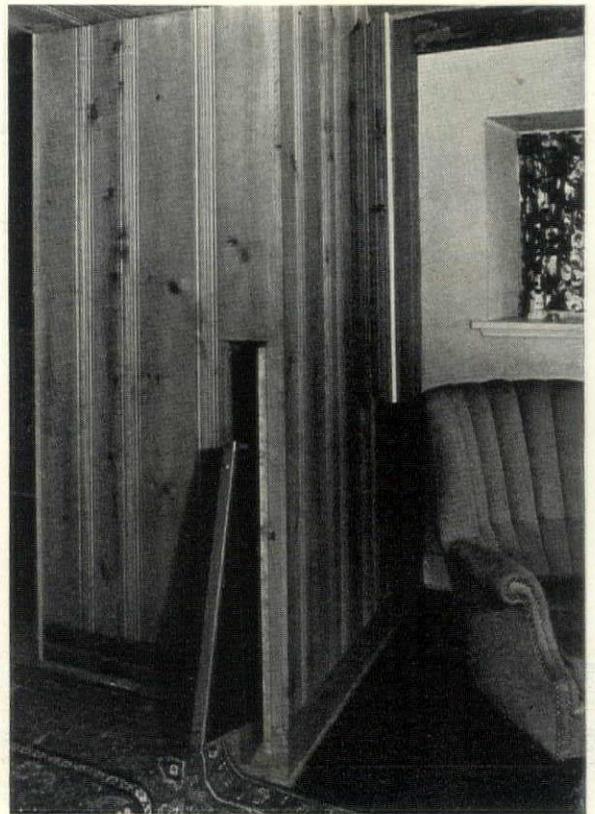
Hedrich-Blessing

CARD TABLE "POCKETS"

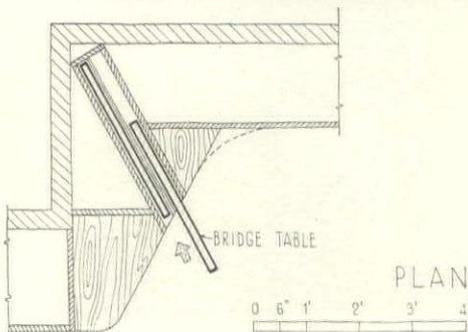
C. V. D. Hubbard



OSCAR G. STONOROV, Architect, Philadelphia, Pa.

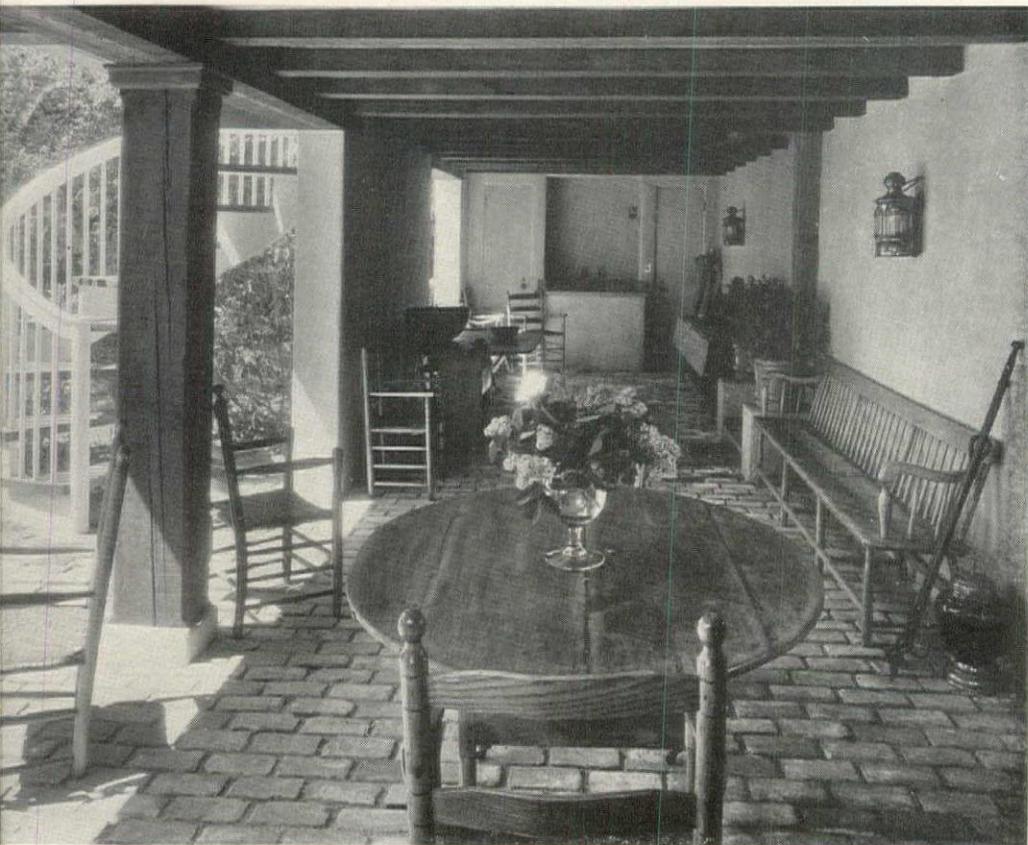


Daniel Reynolds Merrill



Nothing is more annoying than to put away a card table at the back of a closet filled with overcoats, rubbers, and tennis raquets, nothing easier at the time of construction than to provide a slot-like space reserved for this universally necessary item. The examples above show such a storage space placed diagonally under a wall cabinet (left) and parallel to the back wall of a closet (right).

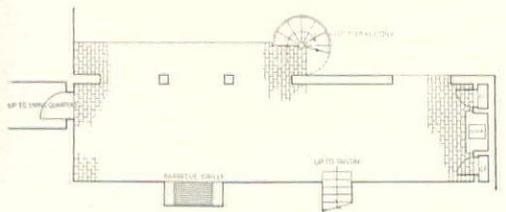
BASEMENT TERRACE AND BAR



WILLIAM WILSON WURSTER, Architect, San Francisco, Calif.



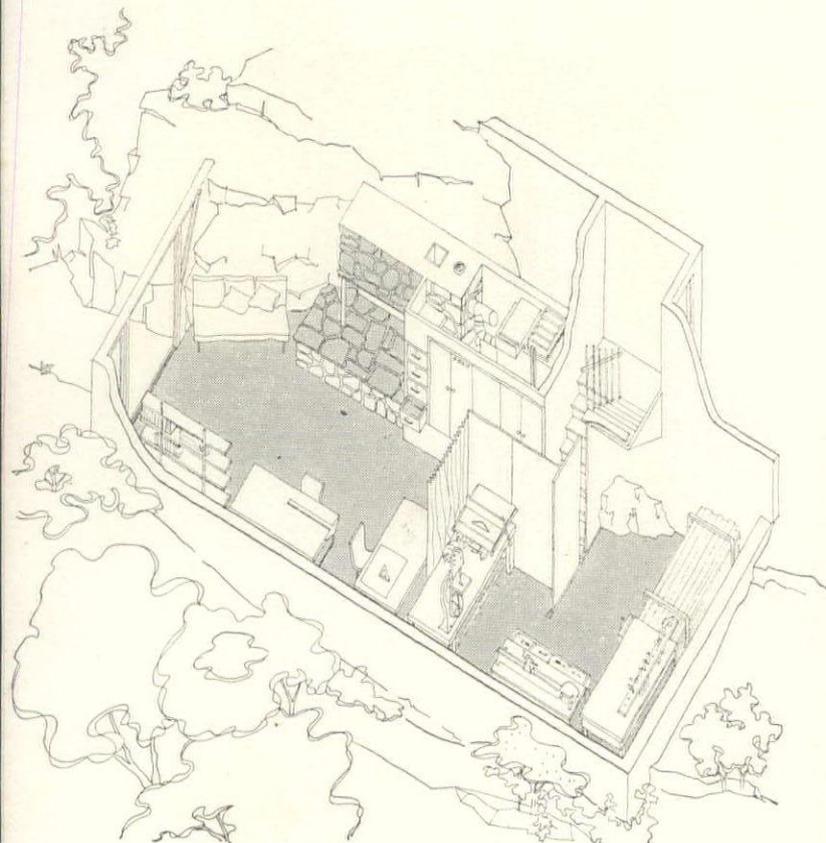
Roger Sturtevant Photos



The recreation terrace and bar above represents an excellent use of a steeply sloping site where the grade puts the house a whole floor out of the ground at the back. A spiral stair connects the unit with a living room balcony on its roof. The brick pavement is placed directly on the ground and extends out from the building to form a terrace open to the sky.

The workshop below was built in conjunction with the architect's office on the ground floor of his house, and is separated from the balance of the area by floor-to-ceiling curtains. Incorporation of the workshop or hobby room within the main body of the house saves space which might otherwise be wasted in connecting corridors and adds considerably to convenience.

GROUND-FLOOR WORKSHOP



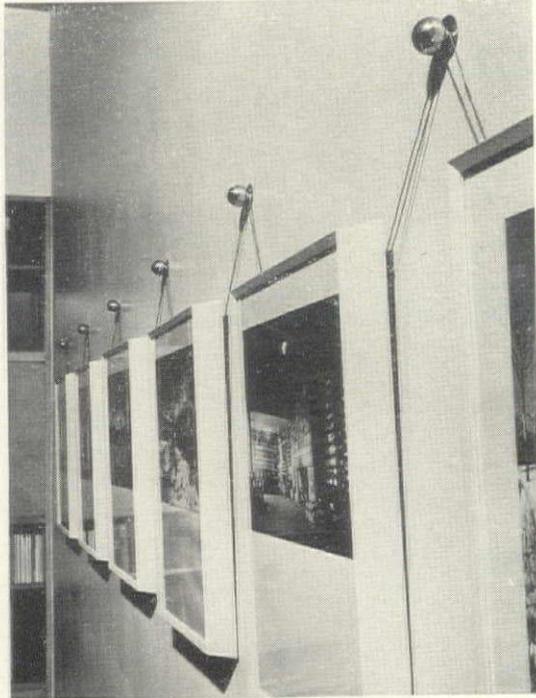
CARL KOCH, Architect, Belmont, Mass.



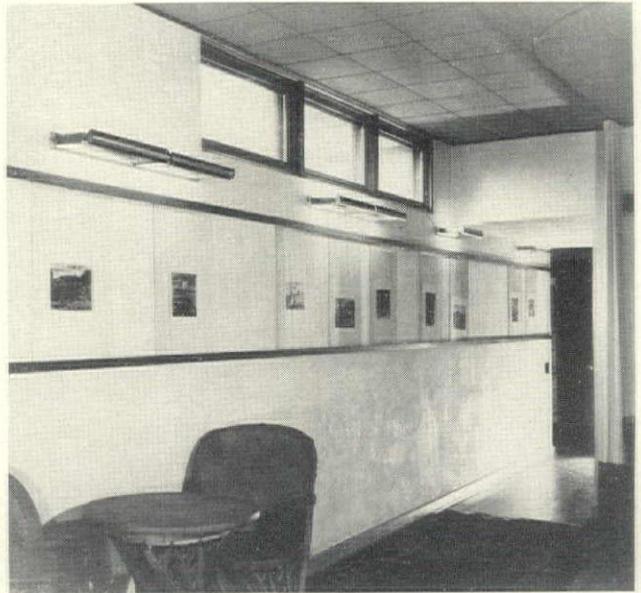
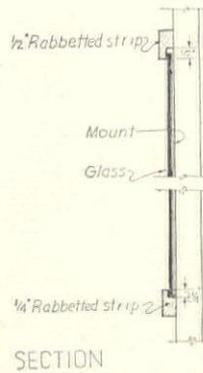
PICTURE GALLERIES

Two excellent solutions of the amateur photographer's perennial problem of how to show his finished work. The frames below have easily-removable backs for changing prints and are hung on permanent brass knobs, strong enough to withstand repeated use. The gallery at the right has continuous rabbetted wood strips which support the mats and prevent curling.

Richard Garrison

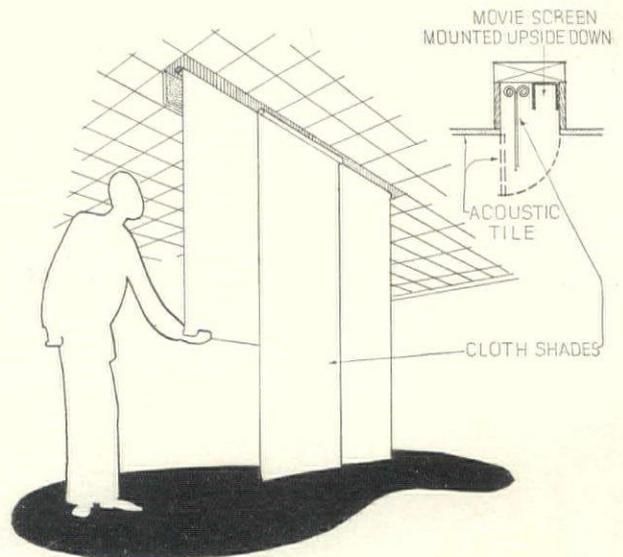


GEORGE KOSMAK, RUTH GERTH & ASSOCIATES, Architects & Designers

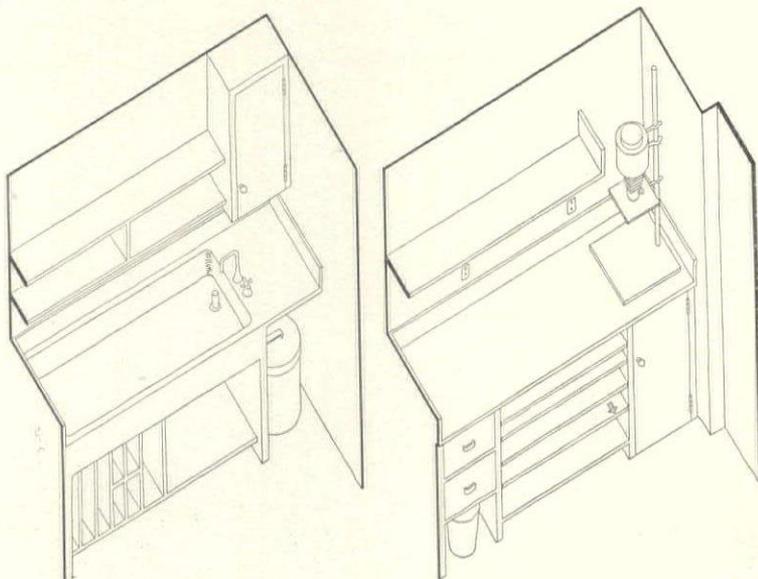


WILLIAM KAESER, Architect, Madison, Wis.

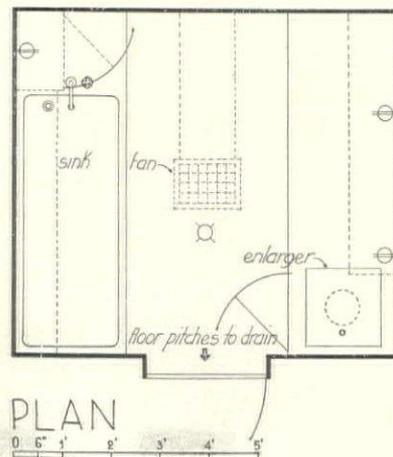
A hinged panel of acoustical tile, matching the balance of the ceiling (right), covers a recess containing a standard motion picture projection screen, which is easily pulled down when needed. Three ordinary roller shades provide a background for the screen and a larger surface for projecting color slides. Below are details of 7 x 8 ft. darkroom containing everything for the advanced amateur photographer, and complete with a ceiling ventilator fan.



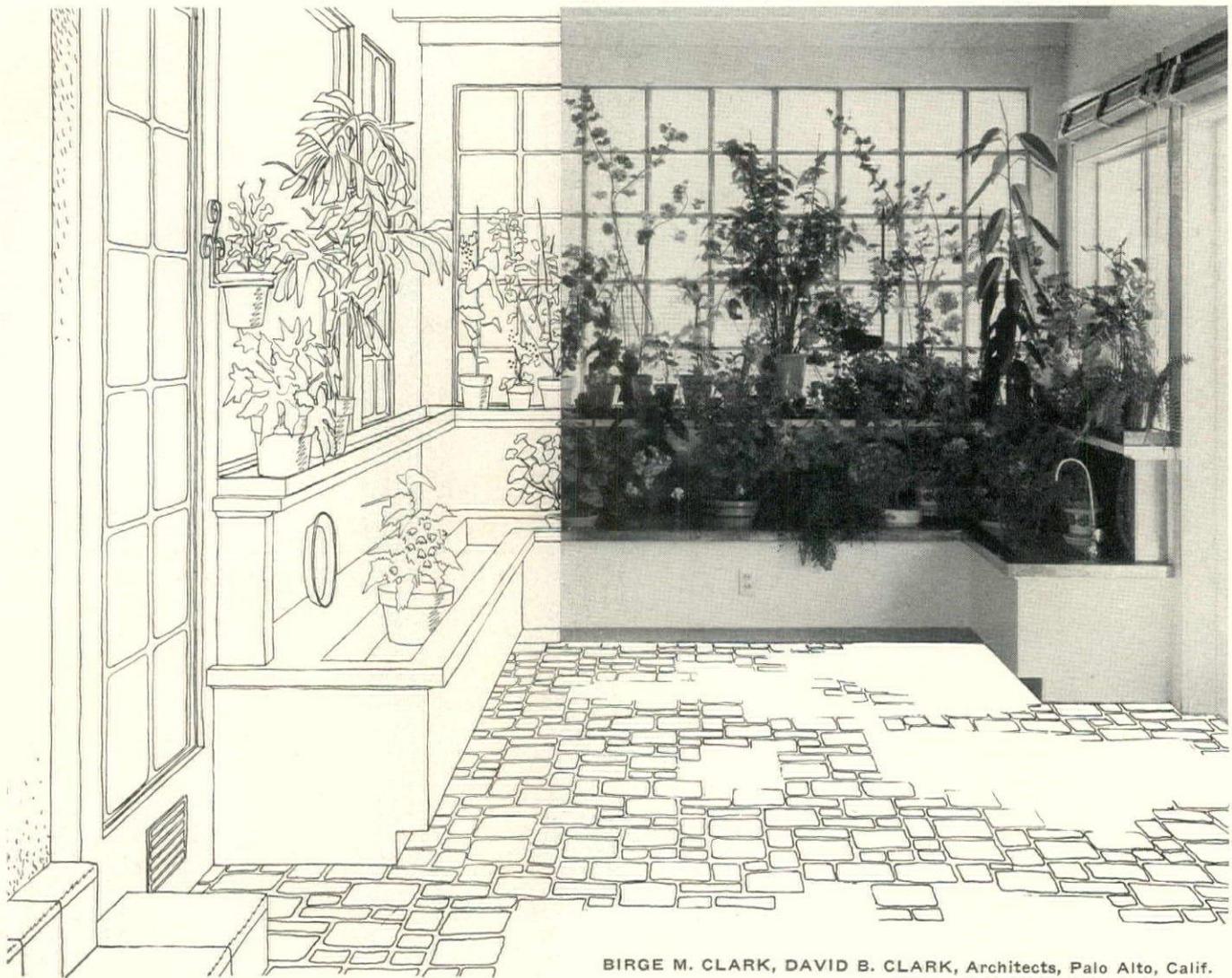
RICHARD M. BENNETT, Architect, New York, N. Y.



IDES VAN DER GRACHT & WALTER H. KILHAM, JR., Associated Architects, New York, N. Y.



PLANT PORCHES



BIRGE M. CLARK, DAVID B. CLARK, Architects, Palo Alto, Calif.

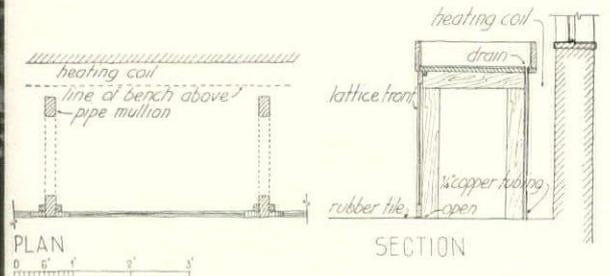
Richard Garrison

Like many another up-to-date house feature, this planting porch recalls the homes of 30 or 40 years ago. A "conservatory" in modern dress, it is fitted with two continuous rows of copper-lined trays, has a small sink and faucet for watering and washing plants.



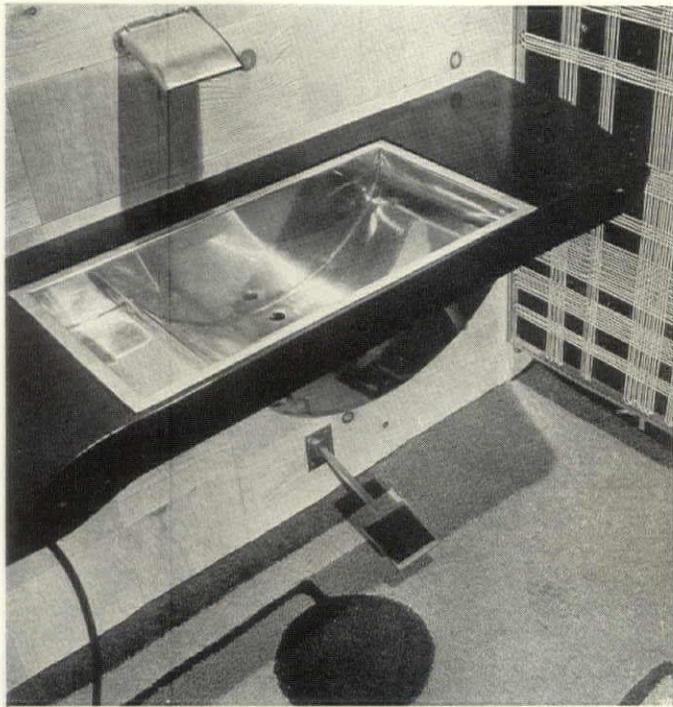
GEDDES & KELLY, Architects, Providence, R. I.

The planting trays at the left are set away from the windows to allow a blanket of warm air from wall hung coils to rise and protect the plants from the chill surface of the glass. The metal-lined trays are fitted with drains, and a continuous lighting fixture is recessed in the ceiling above the plants.



FLOWER SINK

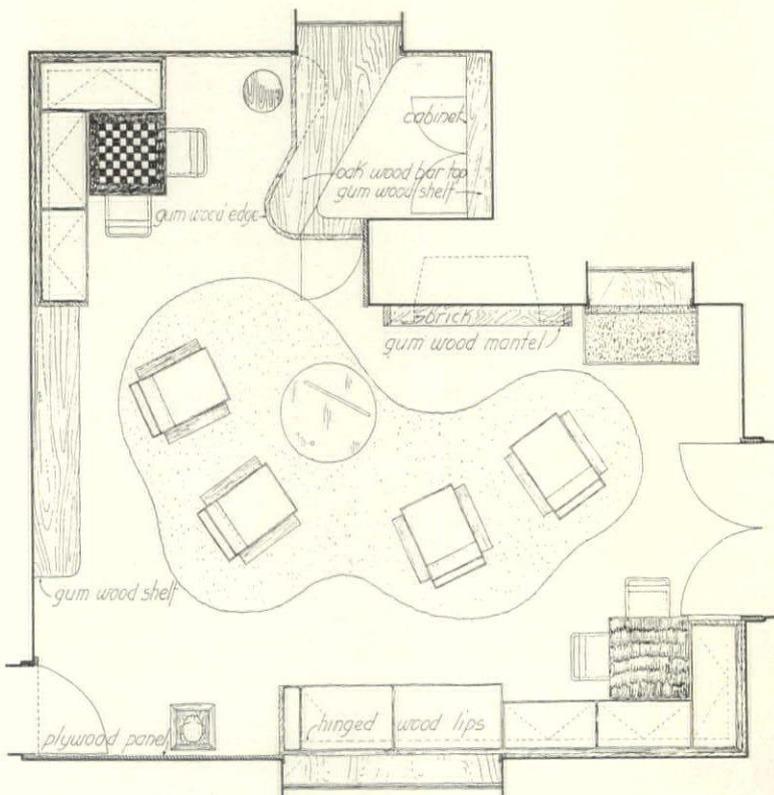
Robert M. Damora



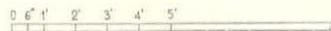
WALLACE K. HARRISON, Architect, New York, N. Y.

In the absence of a complete plant room, a sink for arranging cut flowers is an appreciated feature. The one at the left has been specially constructed with a high, broad spout controlled by a foot treadle which leaves both hands free to hold the vase.

RECREATION ROOM

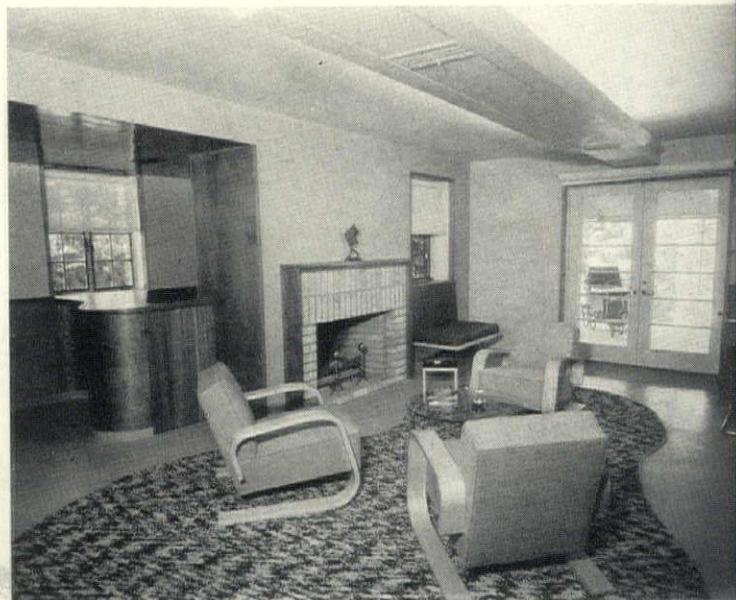


PLAN



WILLIAM MUSCHENHEIM, Architect, New York, N. Y.

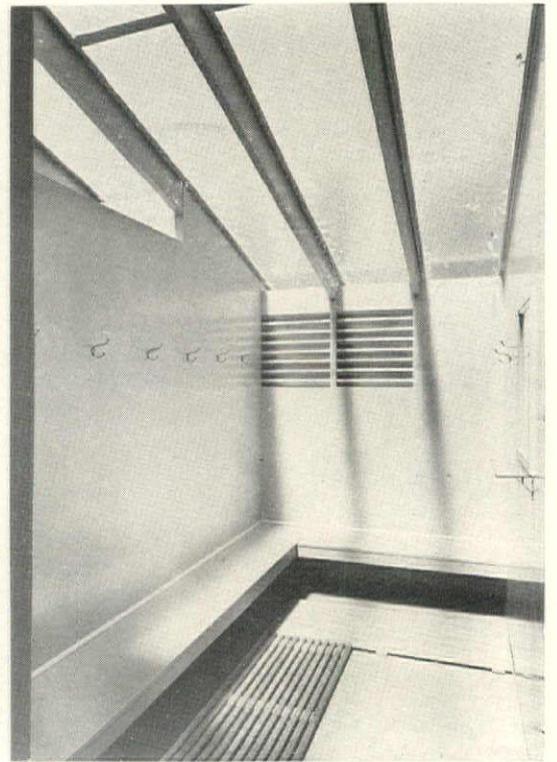
The universally popular "rumpus room" of the operative builder has only recently begun to find architectural favor and architectural expression in the custom-designed house. Lifted out of the basement, as in this excellent example, such a room can be both attractive and practical, and fills a real need by providing a suitable space for informal entertainment.



PRIVATE BATH HOUSE

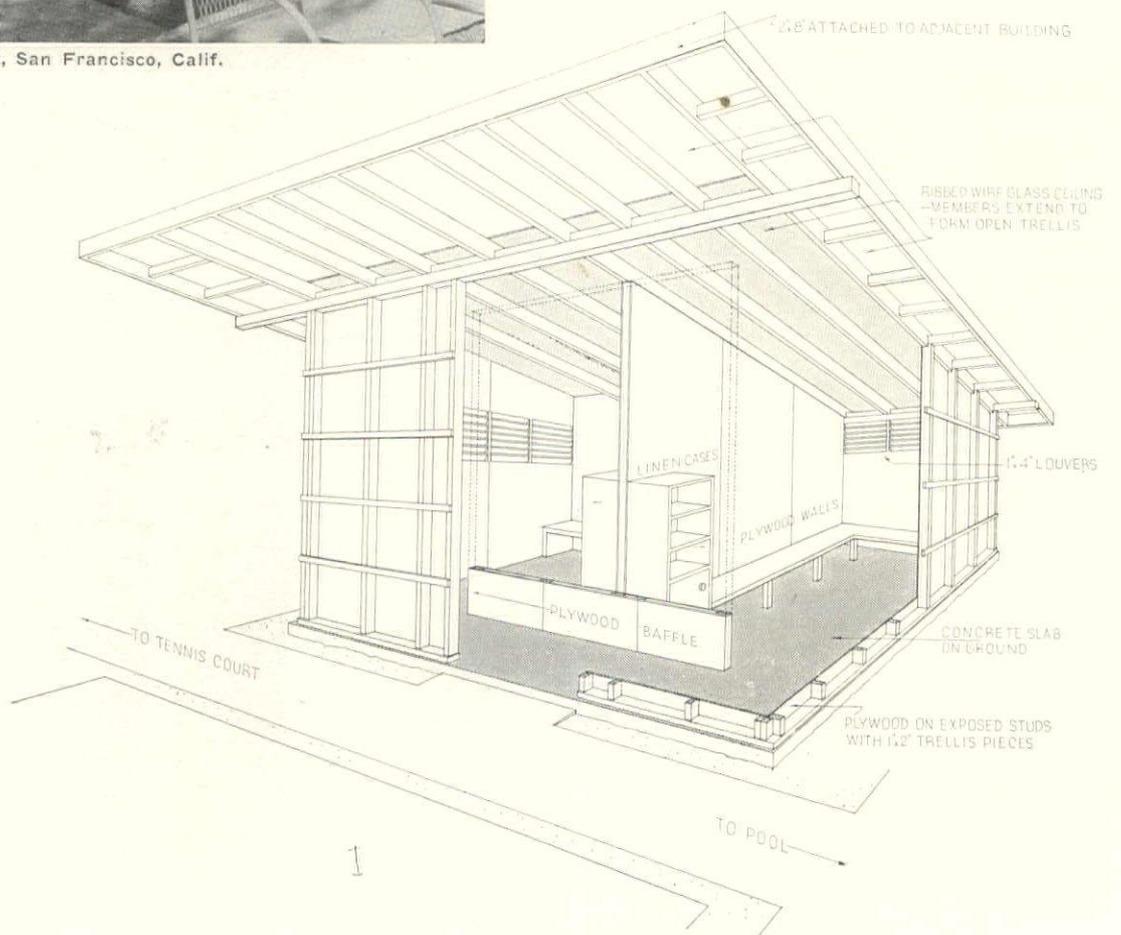


FRANCIS E. LLOYD, Architect, San Francisco, Calif.



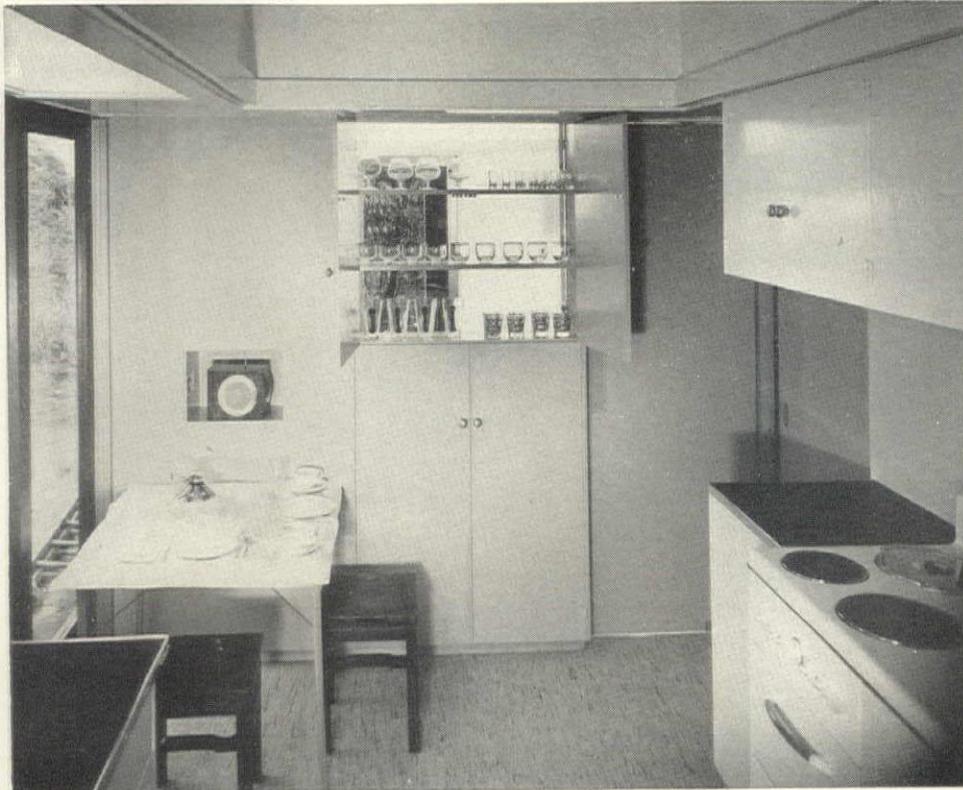
Philip Fein Photos

This delightful little building is used in conjunction with a private swimming pool and tennis court, to relieve the house of the wear and tear which would otherwise result from the use of these facilities. Because such structures are often damp and dark, it was made as open as possible to both light and air. Instead of doors, a system of baffles is used to provide the needed privacy.

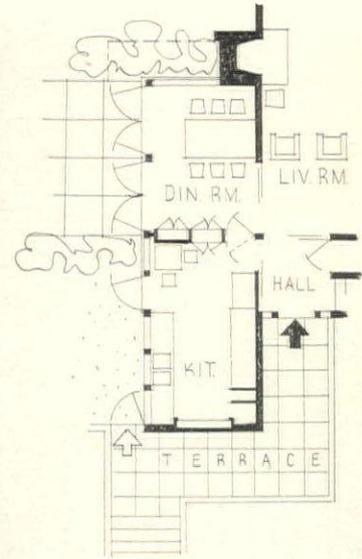


TWO-WAY CUPBOARDS

Fred R. Dapprich



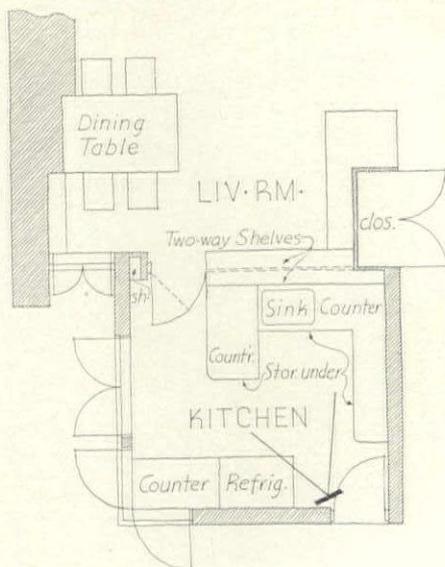
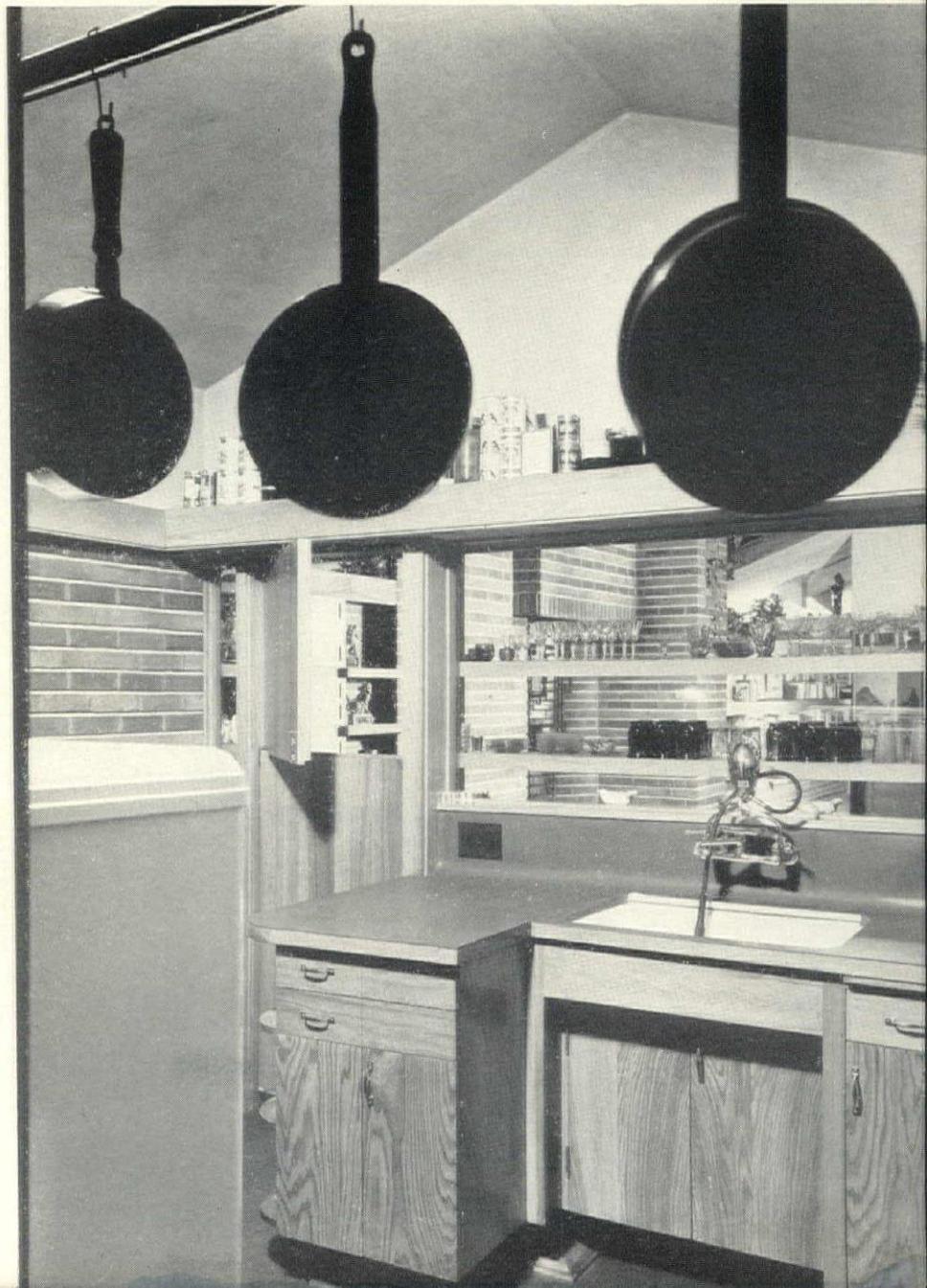
HARWELL HAMILTON HARRIS, Designer, Los Angeles, Calif.



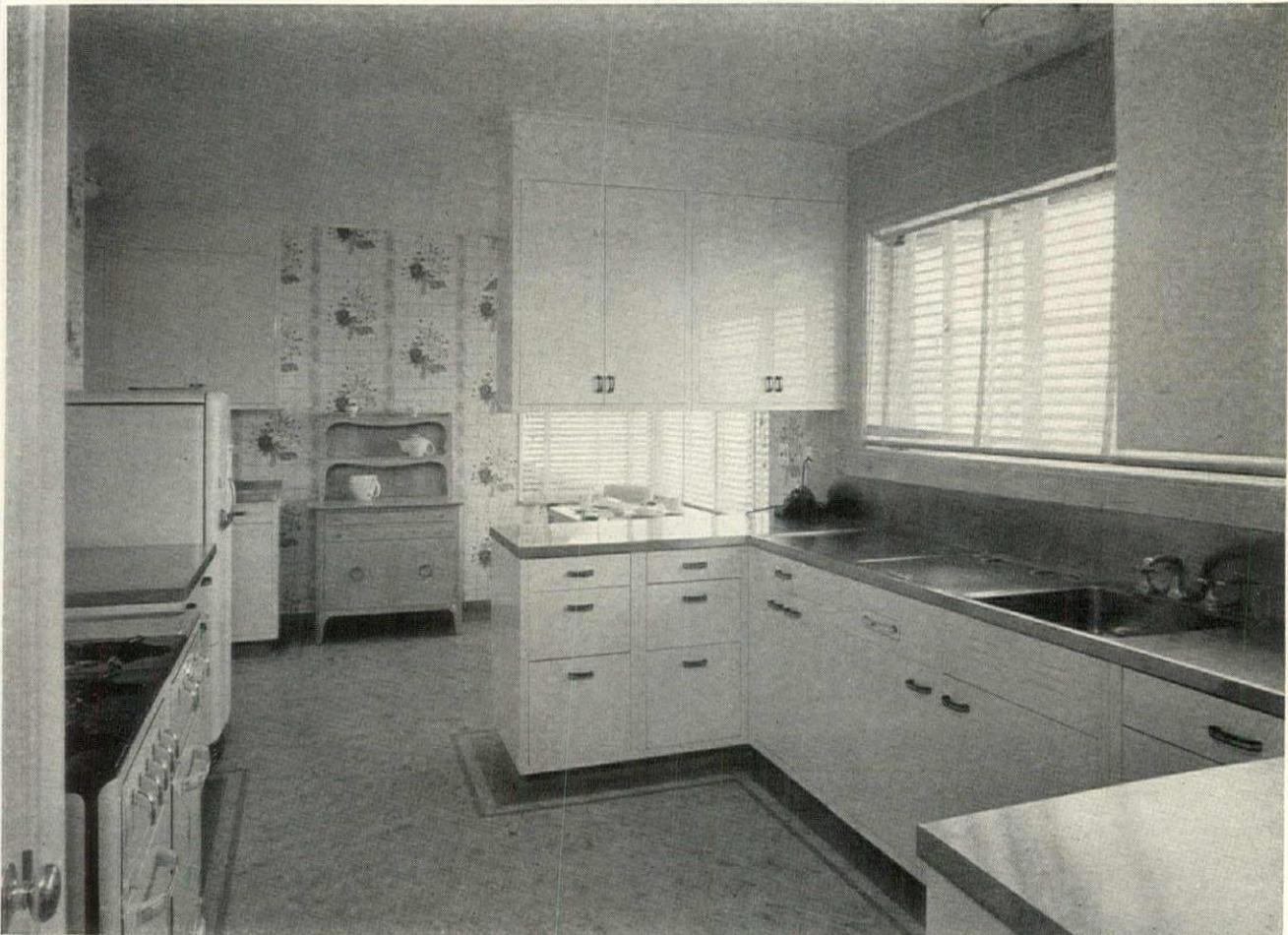
China cupboards opening on both sides and accessible from both dining room and kitchen save much walking back and forth between the two rooms, whether or not an accompanying service counter is considered desirable. Both examples on this page are of the type where such a cupboard is used alone, the unit by Frank Lloyd Wright employing open shelves without doors on either dining or kitchen sides.

FRANK LLOYD WRIGHT, Architect, Spring Green, Wis.

Hedrich-Blessing



DIVISION BETWEEN KITCHEN AND BREAKFAST ROOM

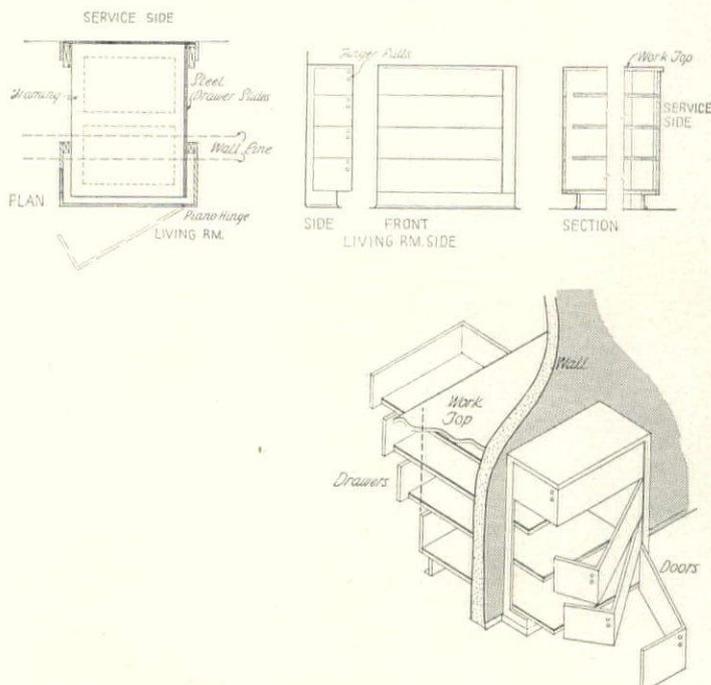


Roger Sturtevant

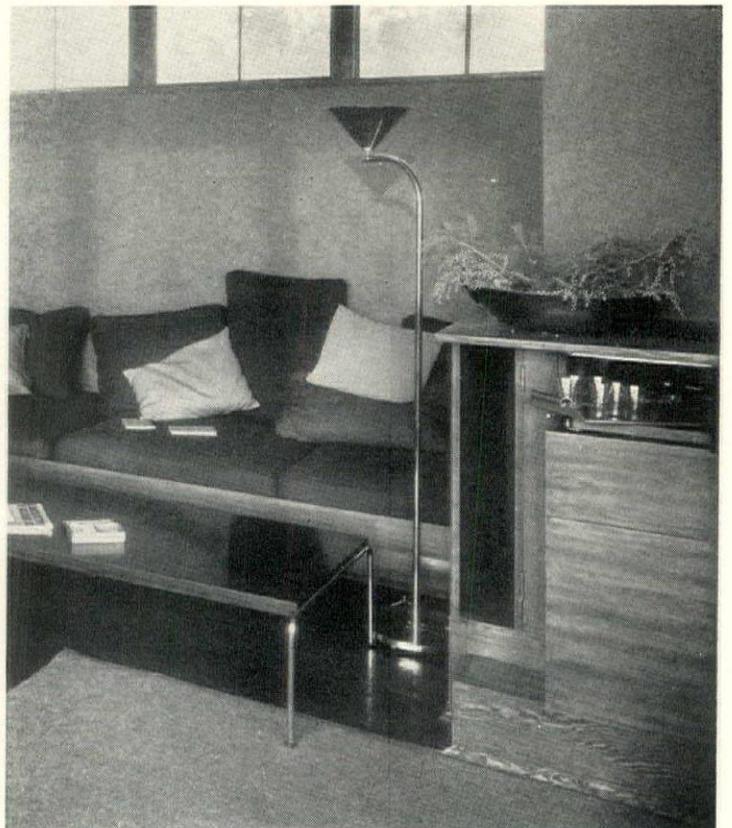
BIRGE M. CLARK, DAVID B. CLARK, Architects, Palo Alto, Calif.

One of the principal problems in the design of the servantless house is to create suitable divisions between cooking and eating areas while at the same time maintaining maximum convenience and a sense of spaciousness. One excellent solution is shown above, where hanging cupboards and a projecting serving counter unit divide cooking and eating portions of a large kitchen-breakfast room. Where the dining bay is made a part of the living area, as in the example below, the serving unit may be treated so as to achieve greater privacy. The vertical space between the couch and the serving unit (photo) is for storage of trays.

KITCHEN-LIVING ROOM SERVICE CABINET

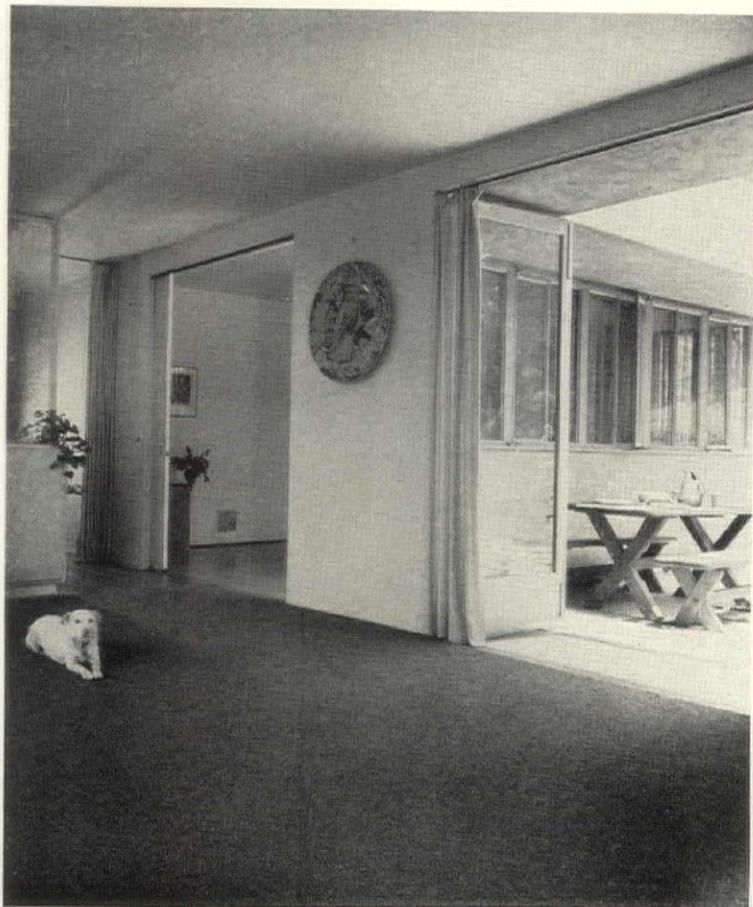


RICHARD J. NEUTRA, Architect, Los Angeles, Calif.



Luckhaus

KITCHEN-DINING-LIVING, OUTDOOR-DINING UNIT



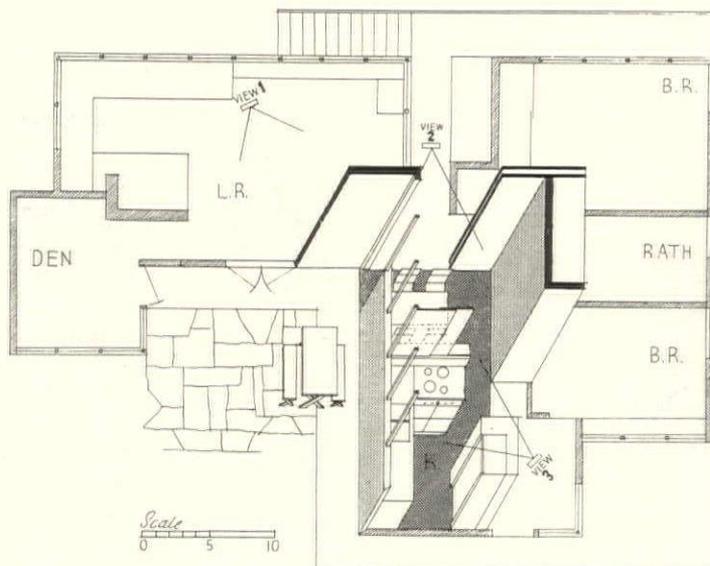
RAPHAEL S. SORIANO, Designer, Los Angeles, Calif.

VIEW 1.



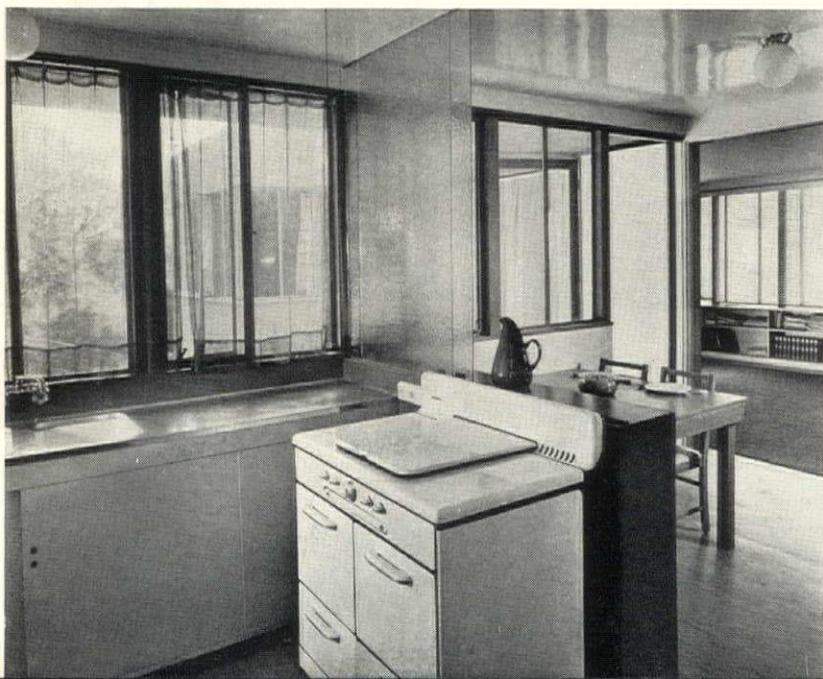
VIEW 2.

All photos, Juvus Shuman



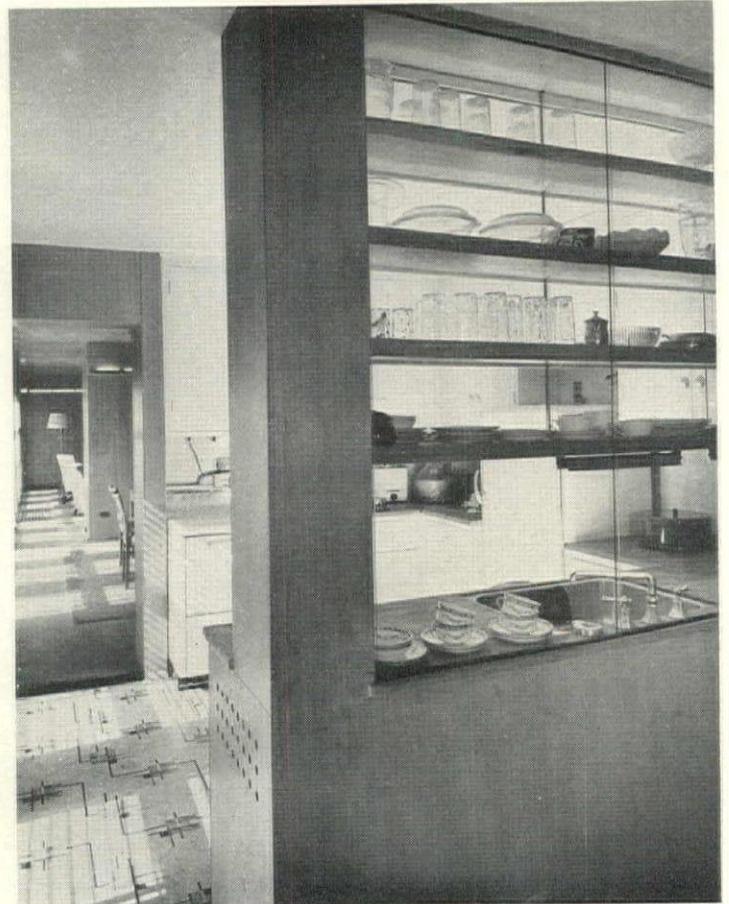
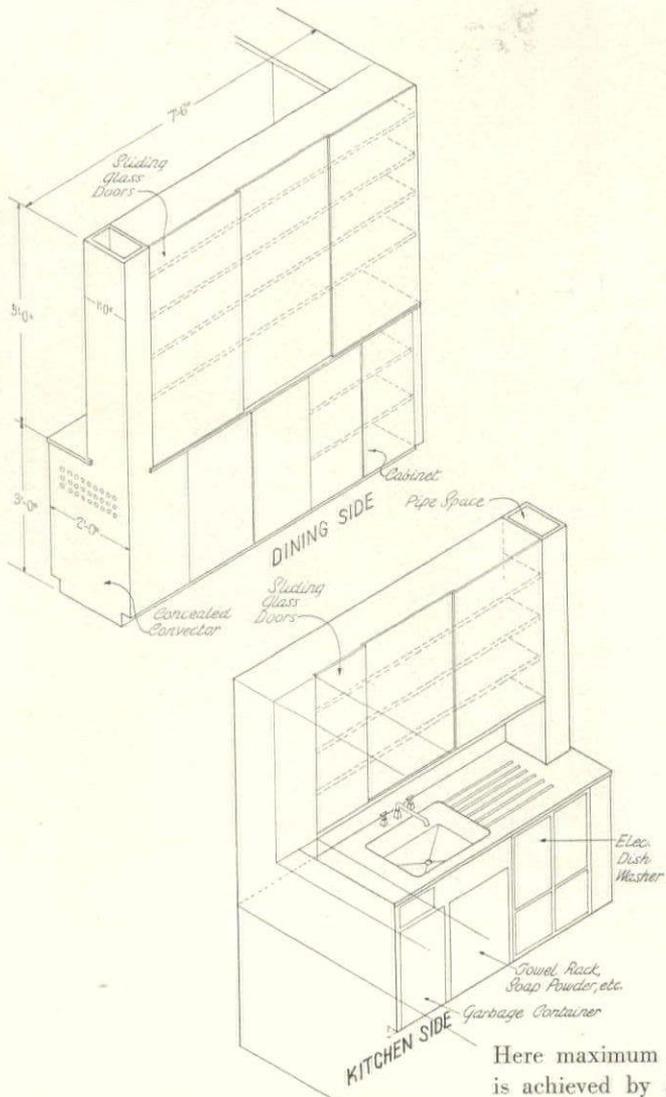
VIEW 3.

Complete flexibility in the division of space between cooking, dining, outdoor dining, and living areas is achieved in this ingenious arrangement. Living and dining areas are separated by a large sliding door, the latter screened from the kitchen by sliding panels of obscure glass. The three elements are arranged in the shape of an L, surrounding a flagged terrace used for outdoor dining, opening through large swinging doors from the living room as well as from the dining space. The generous windows and out-swinging doors are protected from the weather by a generous roof overhang.



TWO-WAY CUPBOARD AND SINK

Ben Schnall

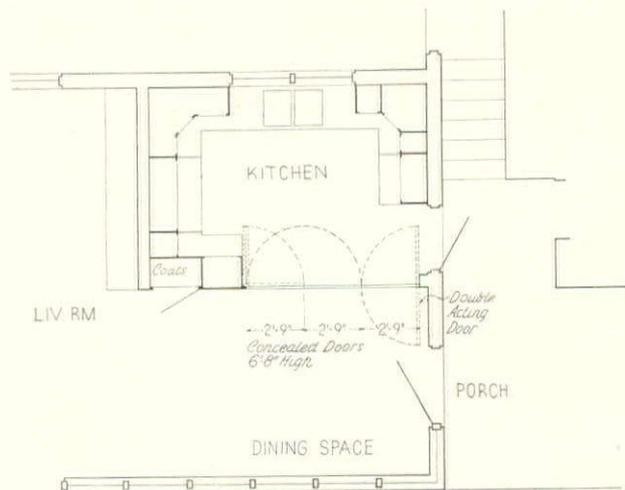


WILLIAM HAMBY AND GEORGE NELSON, Architects, New York

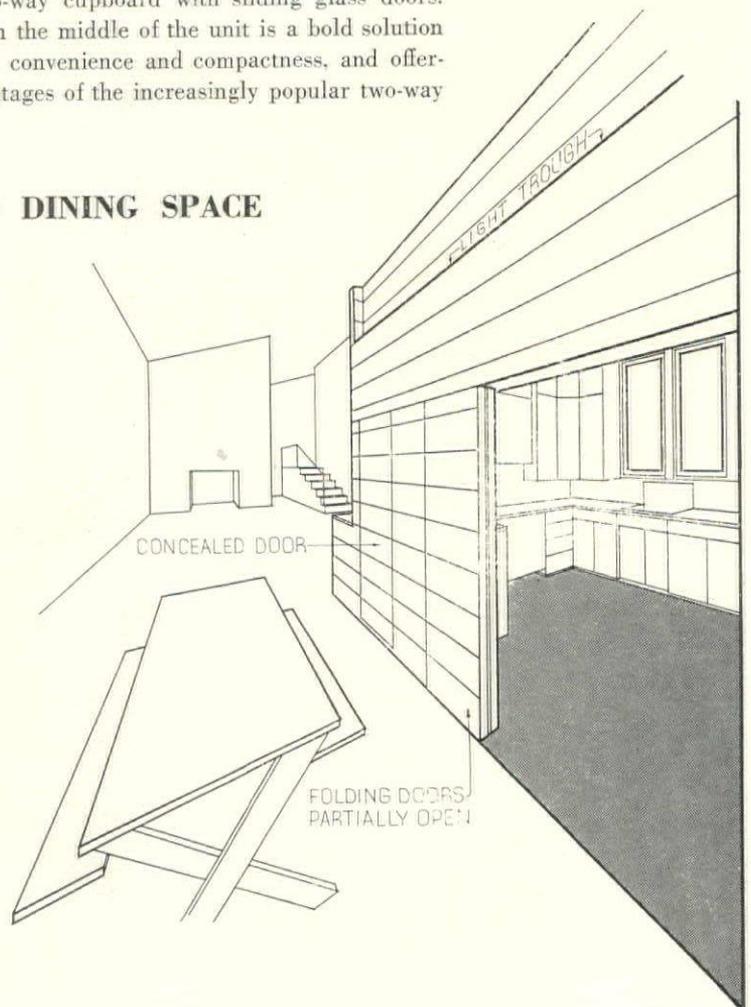
Here maximum openness between kitchen and breakfast room is achieved by a two-way cupboard with sliding glass doors. Location of the sink in the middle of the unit is a bold solution making for maximum convenience and compactness, and offering some of the advantages of the increasingly popular two-way sink.

FOLDING DOORS BETWEEN KITCHEN AND DINING SPACE

Designed to facilitate "every-day" dining and informal entertainment, this arrangement of folding doors as a separation between the cooking and dining areas provides a great deal of flexibility in a simple way. Still another advantage of the solution over more complex arrangements is the freedom of circulation made possible during crowded, informal gatherings.



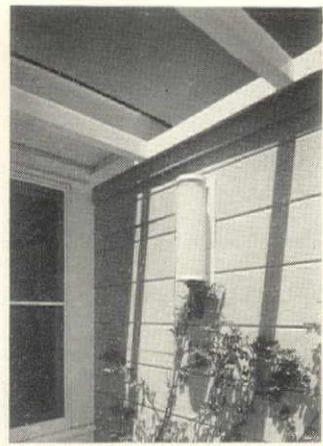
WILLIAM WILSON WURSTER, Architect, San Francisco, Calif.



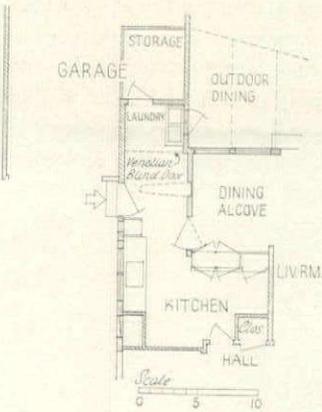
CONCEALED LAUNDRY WINDOW, TWO-WAY CUPBOARD



GARDNER A. DAILEY, Architect



All above photos, Roger Sturtevant



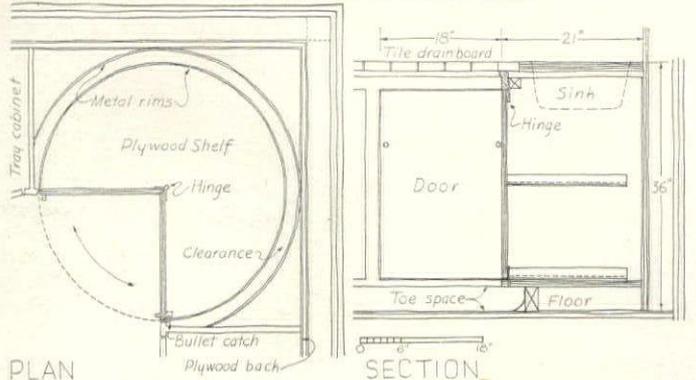
REVOLVING STORAGE UNIT



The details above are from one of the second group of Life houses, as modified at the time of actual construction. The laundry (top 3 pictures) was created by borrowing space from the garage storage-room, and given a window on the living room terrace. The window is fitted with a shutter which matches the outside wall, and is not apparent when closed. Two-way shelves and serving counter (lower picture) separate kitchen and dining areas.

Ingenious revolving shelves, attached to an L-shaped pair of doors which swing back under the counter, provide a great deal of really usable storage space in what would otherwise have been a dead corner. Utensils stored in this unit are actually more accessible than in a conventional cabinet.

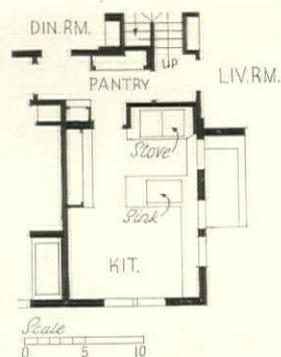
MICHAEL GOODMAN, Architect, Berkeley, Calif.



TWO-WAY PROJECTING SINK



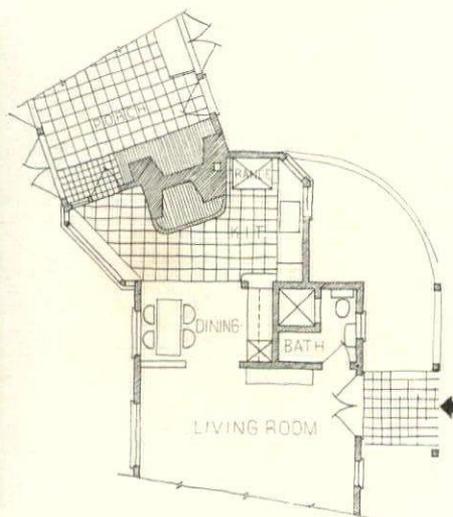
Haskell



DERBY, BARNES AND CHAMPNEY,
Architects, Boston, Mass.

Turning the kitchen sink at right angles to the wall cabinets, a device which has recently been employed in a number of "model" kitchens, has the advantage of doubling the accessibility of this much-used piece of equipment. It also makes possible a workable relationship between the sink and its two related work centers—food preparation and dish washing-storage—and speeds the clean-up "jam sessions" following parties and family gatherings.

"LIVING" KITCHEN



MICHAEL GOODMAN,
Architect, Berkeley, Calif.

The kitchen-living room, an American tradition which has been neglected for decades, is currently staging a comeback both in low-cost housing and in more ambitious, custom-designed work. This excellent example of the latter trend locates the fireplace—so frequently a purely formal focal point for arranging furniture—at the working end of such a room, and divides the room into two parts with a low wall of terra cotta blocks.

BREAKFAST NOOK . . .



GEDDES AND KELLY, Architects, Providence, R. I.

The kitchen breakfast nook is normally used as a work table when necessary; this arrangement adds valuable area through the use of sliding panels which pull out flush with the table surface. Space beneath the seats is accessible for storage.

. . . WORK TABLE



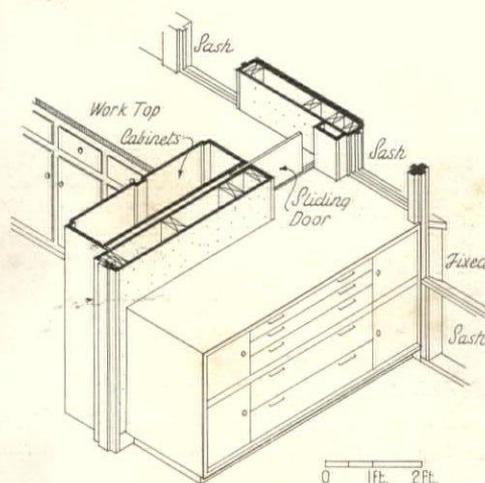
Richard Garrison Photos

PICTURE WINDOW IN KITCHEN — PASS DOOR



Ezra Stoller

CARL KOCH, Architect, Belmont, Mass.



The housewife's desire for a window over the sink, although all too often negated by an equal yearning for ruffled curtains and potted geraniums, expresses a perfectly reasonable demand for an attractive outlook from the one point in the house where she must spend the great part of her working day. Here it is given full expression in a generous picture window beginning right at the work surface and extending almost to the ceiling. The problem of dish storage which the absence of wall space above the counter creates is solved by a floor-to-ceiling cabinet at right angles to the counter, which has been combined with a pass-door communicating with a built-in buffet in the dining room (drawing above).

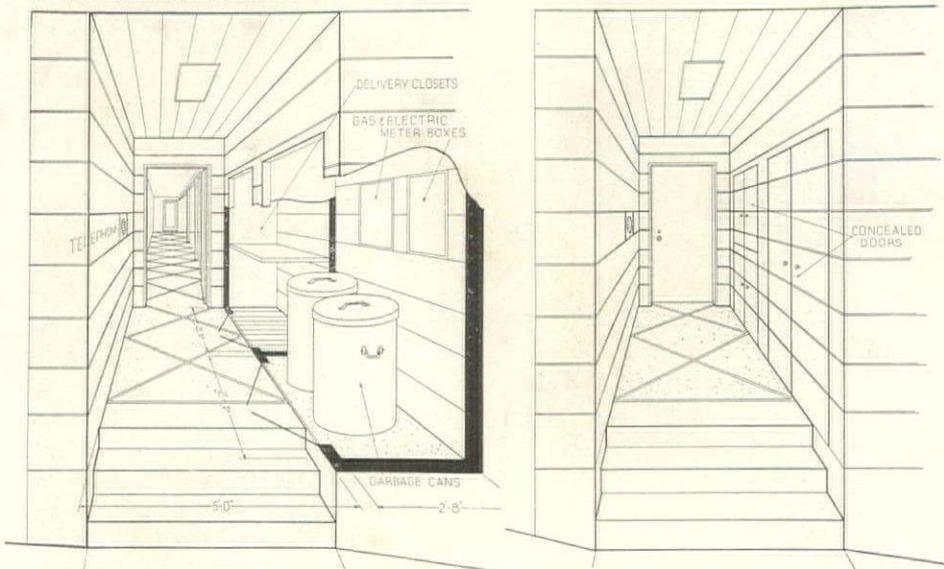
BUFFET-BAR, TWO-WAY CUPBOARD



SAMUEL G. WIENER, Architect, Shreveport, La.

The buffet above (1) has horizontally sliding glazed doors on both sides of the cupboard, a small service opening, and a lower cupboard opening on the kitchen room side. Use of glazed doors in this way is a questionable detail, since it seems to lead to the display of glassware rather than real utilization of the dish-storage unit. The picture in the upper right-hand corner (2) shows a space-saving rounded counter employed at a point where square corners would impede circulation. The drawing (3) is a ventilated cabinet used for storage of vegetables at outdoor temperatures.

ENTRANCE-SERVICE UNIT

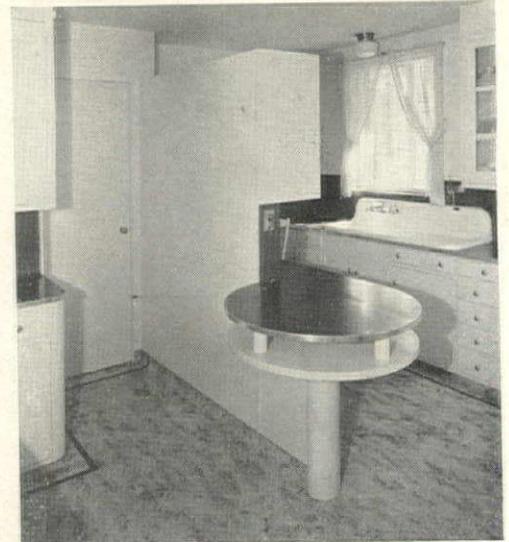
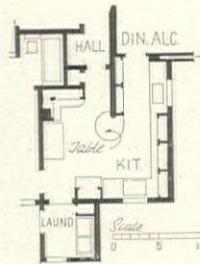


WILLIAM WILSON WURSTER, Architect, San Francisco, Calif.

CIRCULAR COUNTER

Esther Born

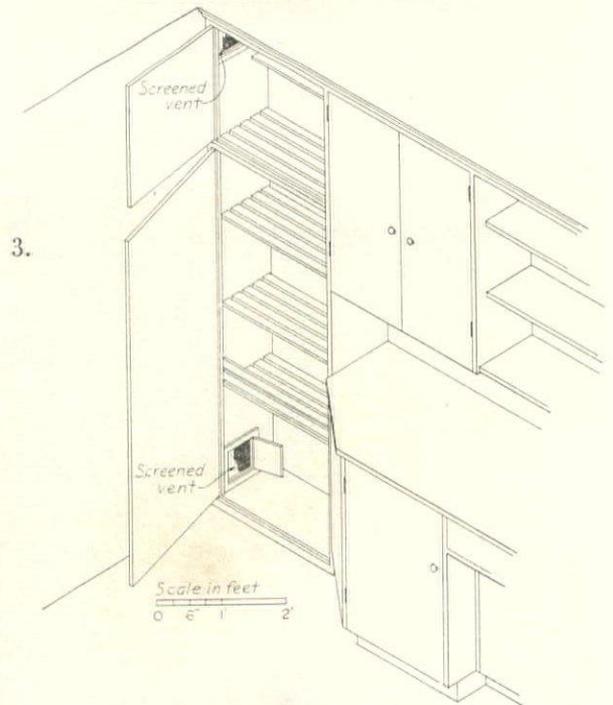
1.



2.

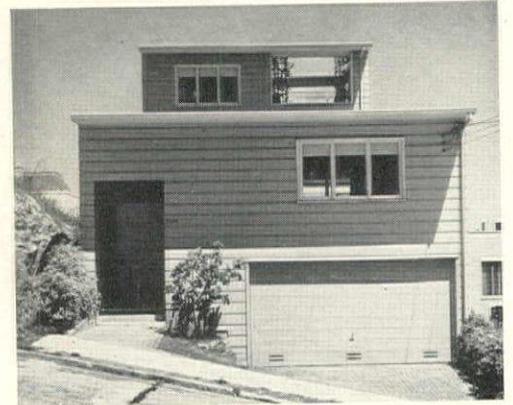
HERVEY PARKE CLARK, Architect

VEGETABLE COOLER



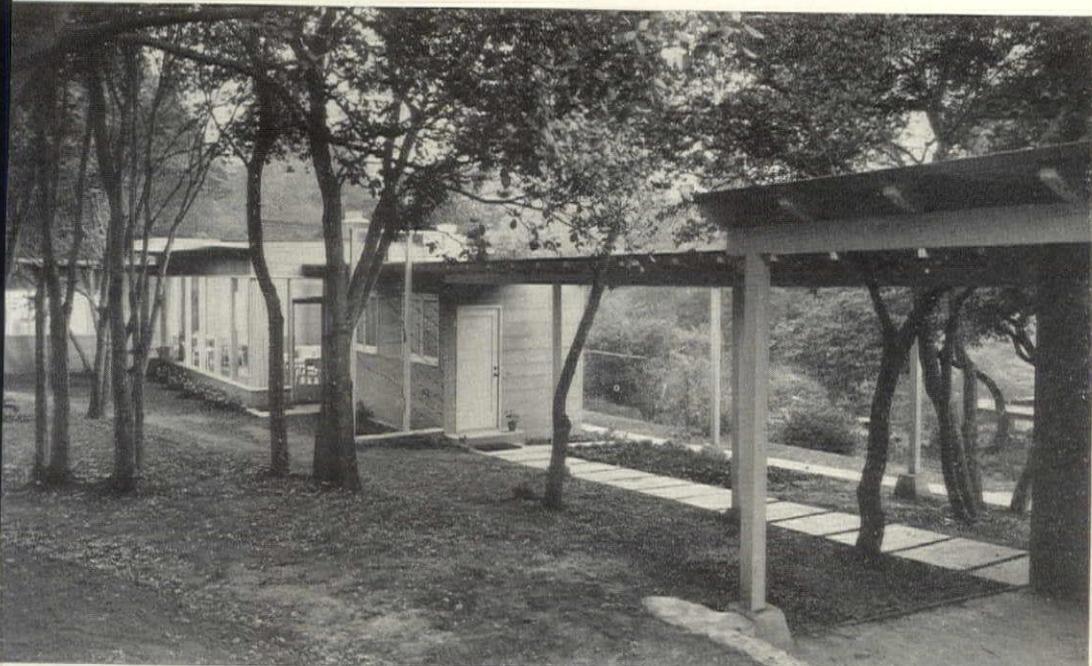
3.

HUGH S. MORRISON, Designer, Hanover, N. H.
Roger Sturtevant

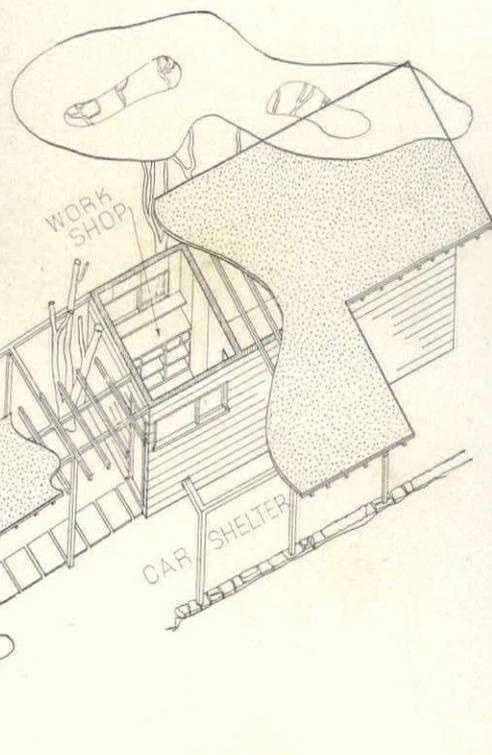


A workable solution of one of the vexing problems of the city house, where formal and service entrances must often be combined, the outdoor locker adjoins the vestibule and provides space for meters, refuse, etc., accessible directly from the street and yet out of sight.

GARAGE-WORKSHOP WITH CONNECTING SHELTER



JOHN EKIN DINWIDDIE
Architect, San Francisco, Calif.



John H. Lohman

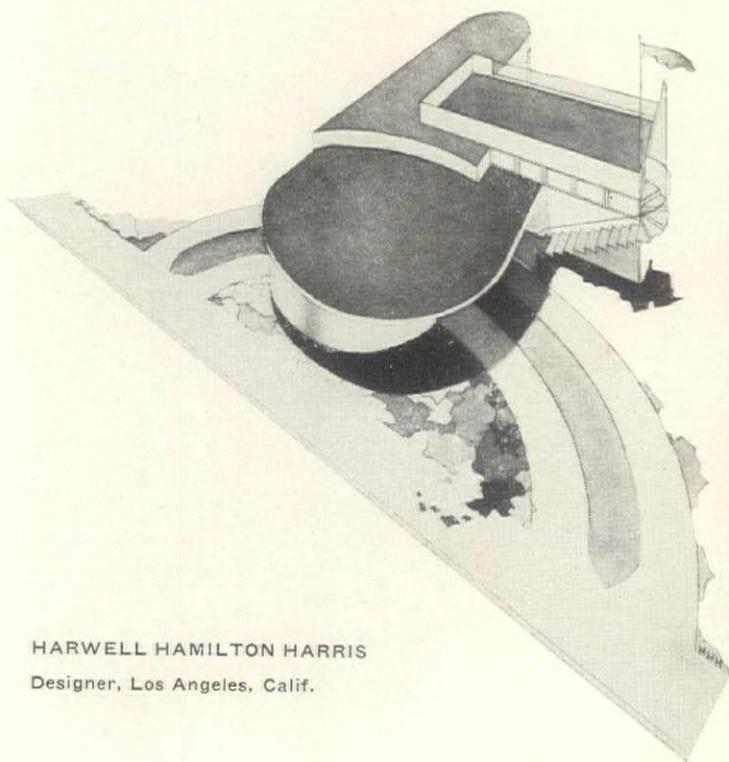


WORKSHOP

Roger Sturtevant

Above is an ingenious hook-up of garage, workshop, service entrance and laundry, connected by a shelter affording protected access in bad weather. The garage below, located at the front of the house, acts as a porte cochere and, since it is open at both ends, requires no backing and filling either going in or out.

DRIVE-THRU GARAGE

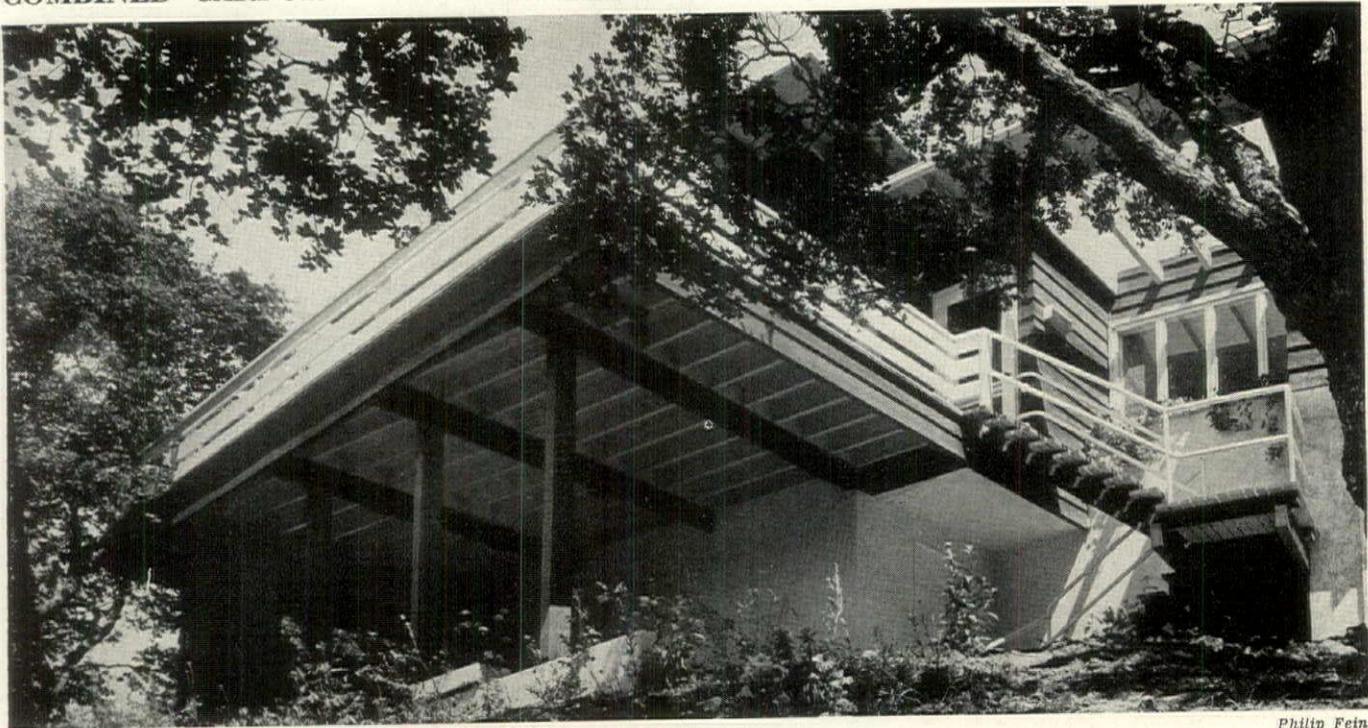


HARWELL HAMILTON HARRIS
Designer, Los Angeles, Calif.



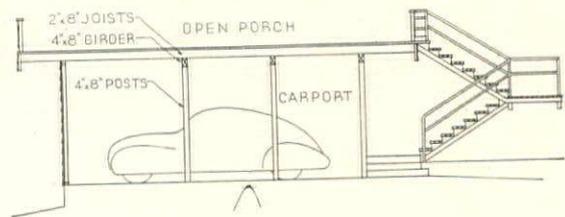
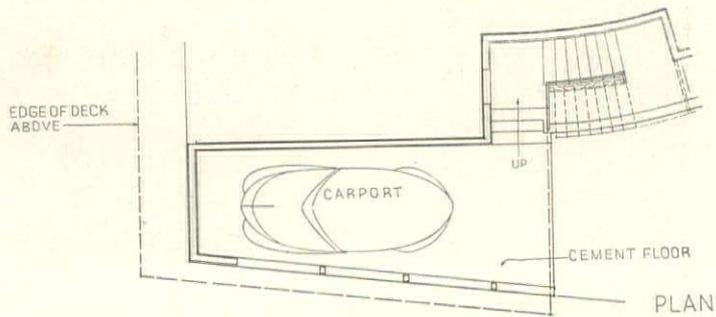
Fred R. Dapprich

COMBINED CARPORT AND ROOF DECK



FRANCIS E. LLOYD, Architect, San Francisco, Calif.

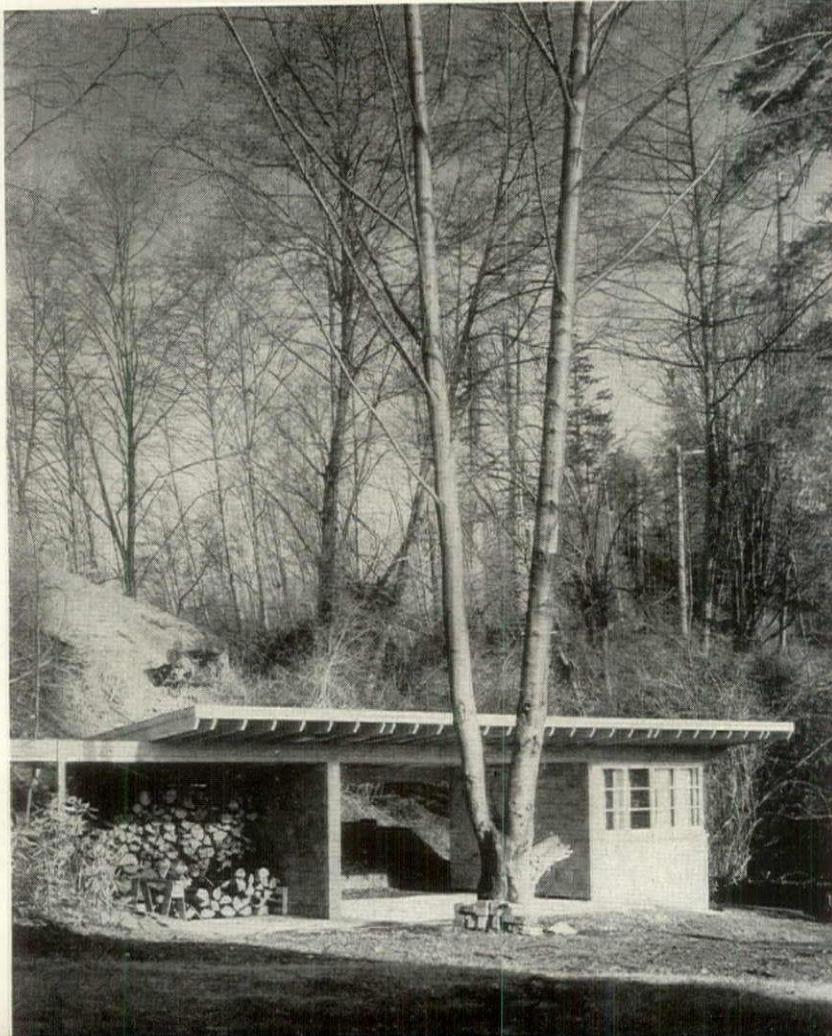
Philip Fein



LONGITUDINAL SECTION THROUGH CARPORT

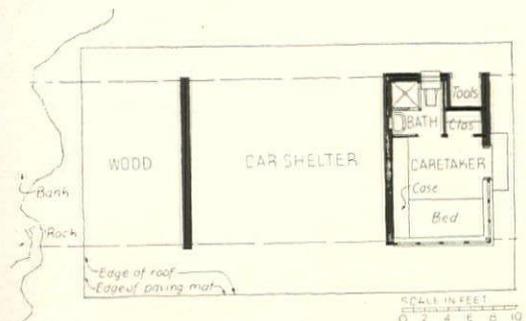
CARPORT-WOODSHED

Richard Garrison



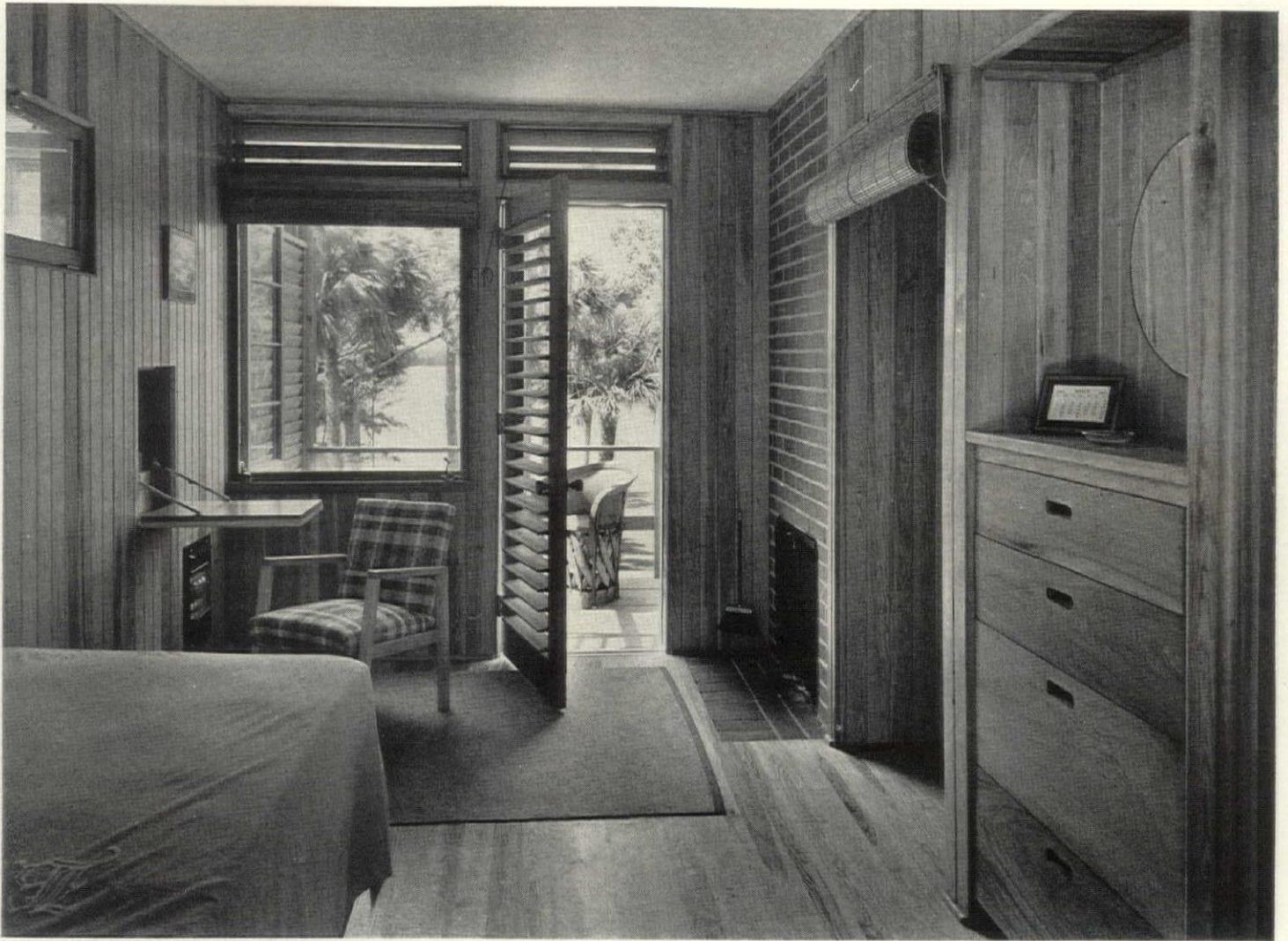
A steeply sloping site (above) makes possible use of the carport roof as a generous deck, opening off the living room and commanding the downhill view. Entrance to the house is by way of an outside stairway built of wood and connecting the two units.

The unit at the left combines the functions of a carport and woodshed with quarters for a caretaker consisting of a room and bath. Shelter provides for two cars, with room for a third during seasons when the woodshed is not in use.

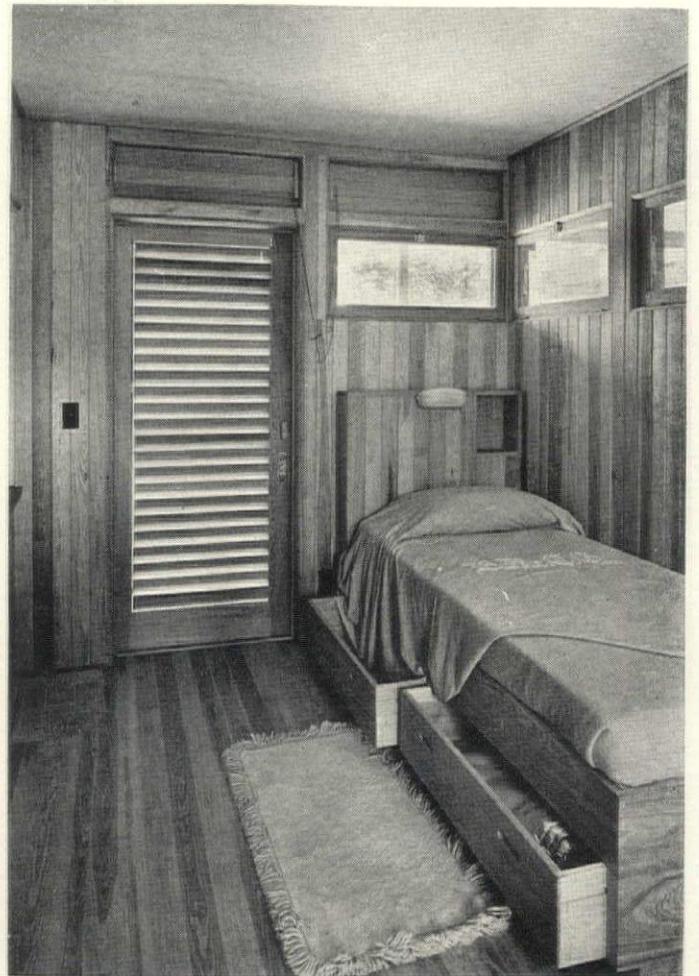
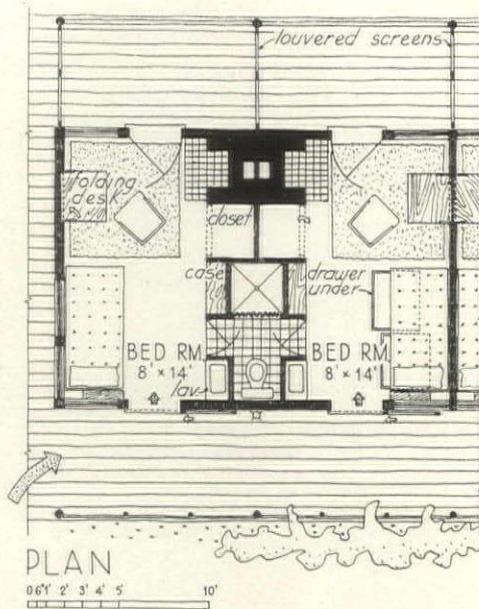


PAUL THIRY, Architect, Seattle, Wash.

GUEST BEDROOM



ALICE MORGAN CARSON, Designer; VAN DER GRACHT & KILHAM, Architects



Samuel H. Gotscho Photos

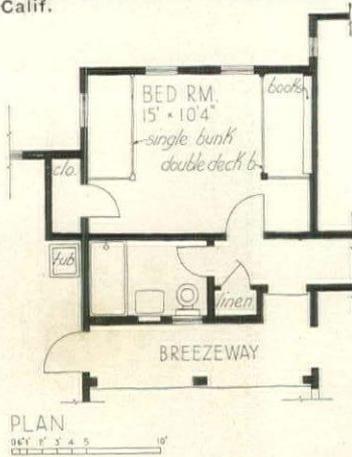
The old argument about large versus small bedrooms has plenty of good reasons on both sides; where a guest room is concerned, as in this instance, the small bedroom offers a practical, economical and entirely adequate solution. Part of a vacation house in Florida, this room may be entered from porches which run along both sides of the wing, and the fittings include a fold-up writing table, built-in dresser, louver doors, and special drawers for blanket storage.

BED - SITTING ROOM

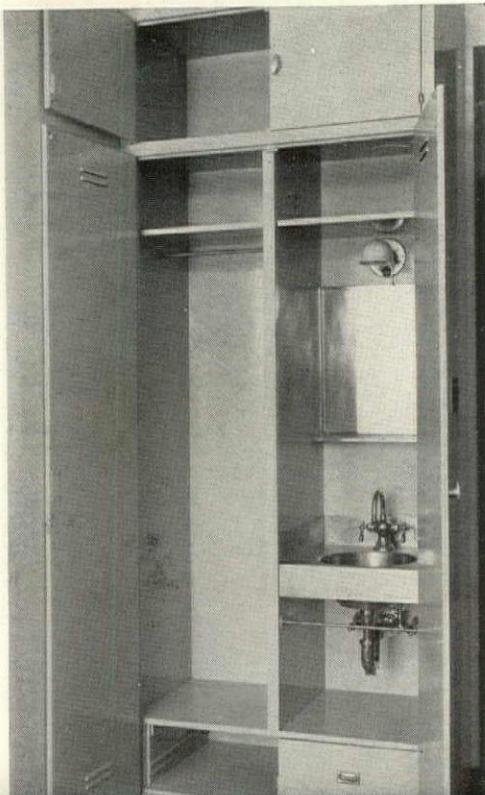


PAUL LASZLO, Designer, Beverly Hills, Calif.

The combined closet and enclosed lavatory below happen to have been installed in a hospital, but the idea is one that is worth more serious consideration in the house than it has received to date. One or two such units in bedrooms offer a completely practical and relatively inexpensive method for reducing the strain on the existing bathroom facilities.



CLOSET LAVATORY



Rodney McCay Morgan

SCHULTZE & WEAVER,
Architects



Julius Shulman Photos

A bed-sitting room and study, in which a curtain on a curved track creates a degree of separation without the expense of a heavier partition. The room has considerable flexibility, due to the manner in which built-in furniture and storage space has been used.

The double bunk is an ancient device for increasing sleeping accommodations without adding rooms, and appears to be enjoying a new wave of popularity. In the combination study and bedroom below it has been designed as an integral part of the room.

DOUBLE BUNKS

Arthur E. Haskell



ROYAL BARRY WILLS, Architect, Boston, Mass.

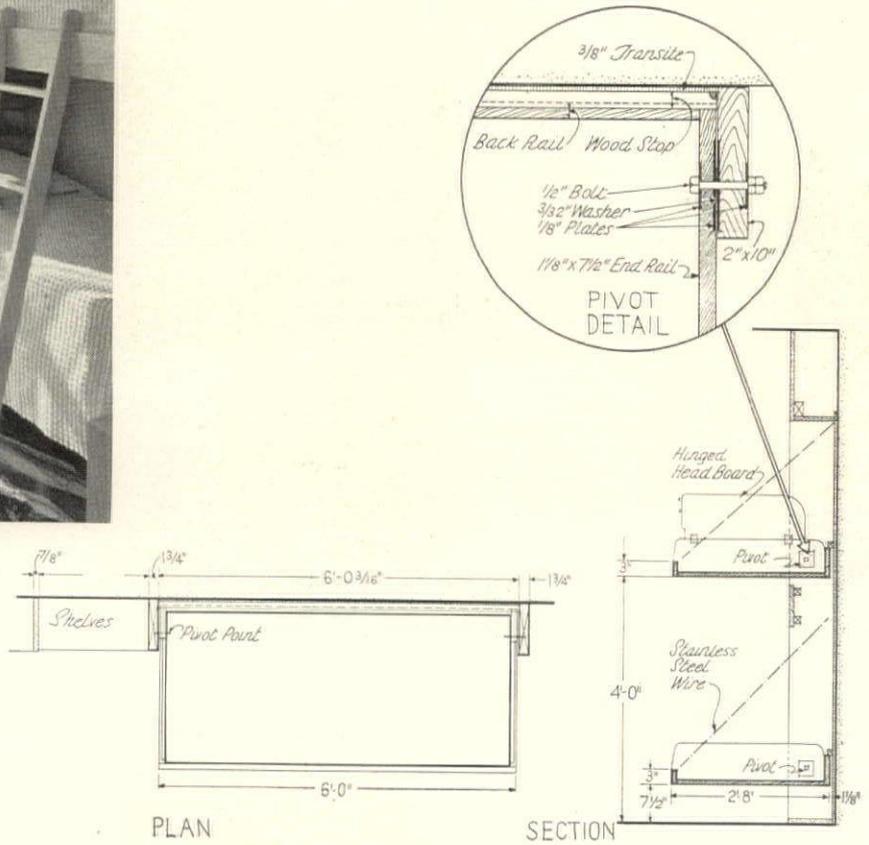
DOUBLE BUNKS

Roger Sturtevant



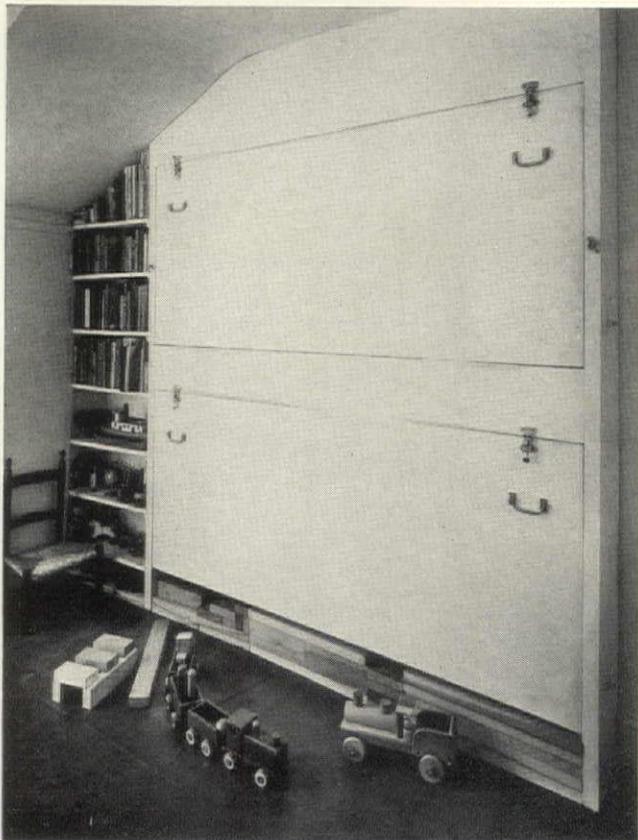
GARDNER A. DAILEY, Architect, San Francisco, Calif.

The illustration above shows what is probably the most common treatment of the double bunk: a conventional bed with a wood frame above. The Pullman idea, carried out with great resourcefulness in the example below, is a complete solution for the problem of combining sleeping and play space in a limited area. Note the storage compartment for building blocks below the lower bunk and the use of cables to replace vertical supports.



PULLMAN-TYPE BEDS

THOMAS WILLIAMS, Architect, New York, N. Y.

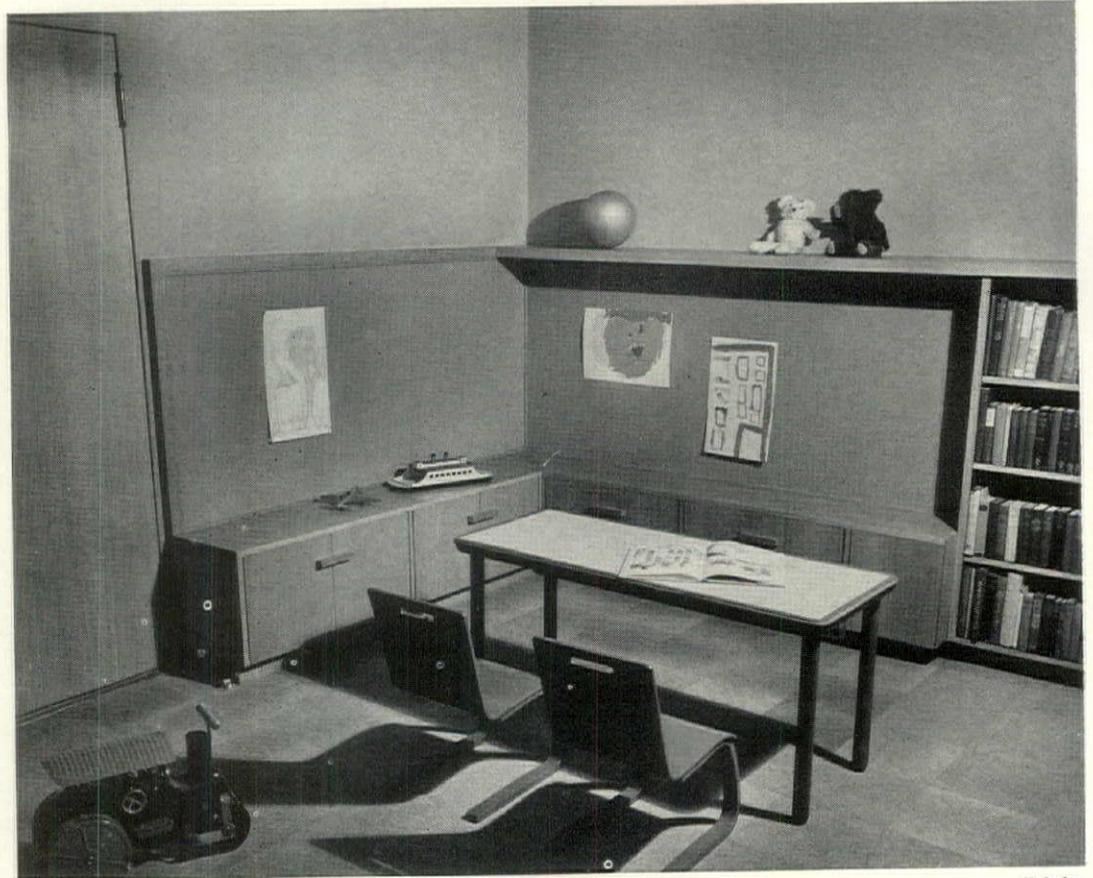


Francis G. Mayer Photos



NURSERY

The full-fledged nursery is a luxury room, possible only in the residence where the budget can be stretched beyond the necessary living elements. With the proper furniture, however, and accessories such as cork wall panels, the idea can be successfully applied to the corner of any child's bedroom of reasonable size.

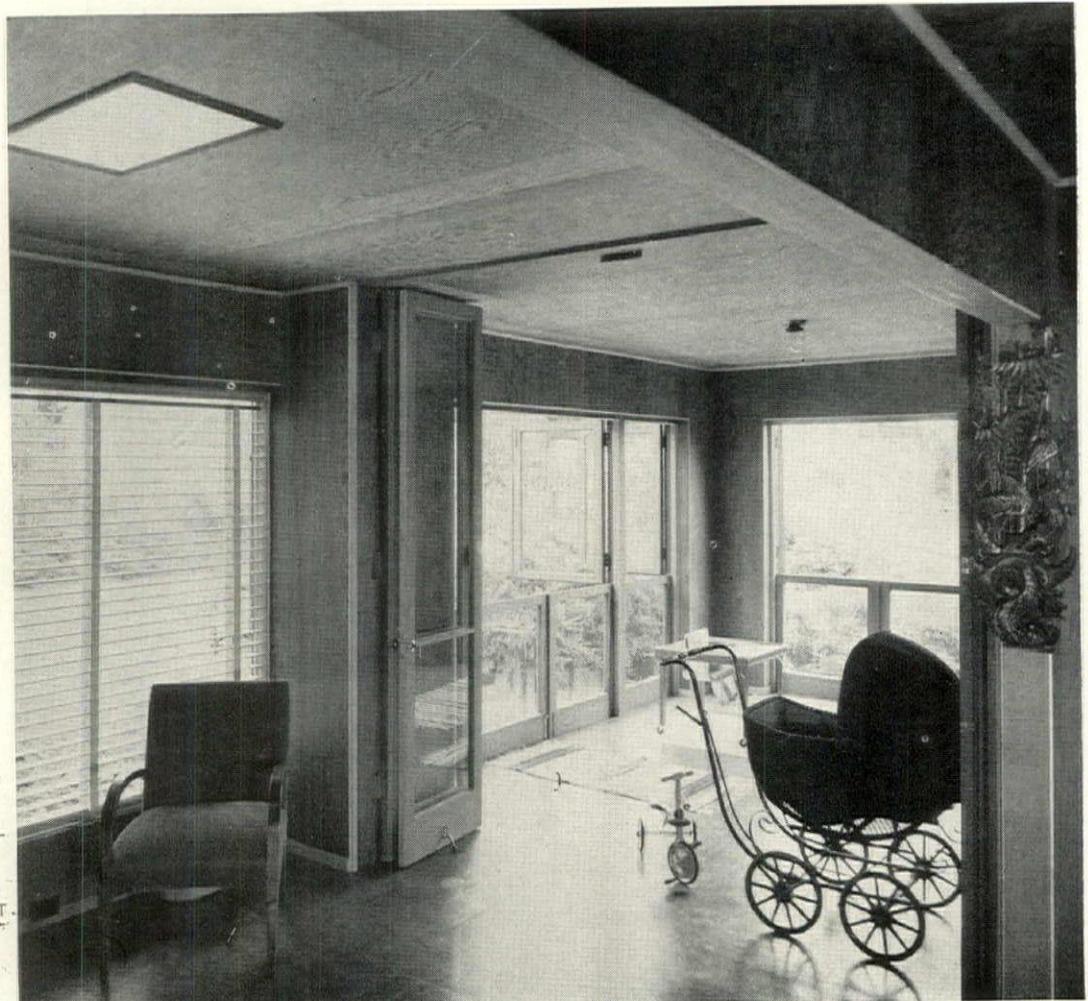
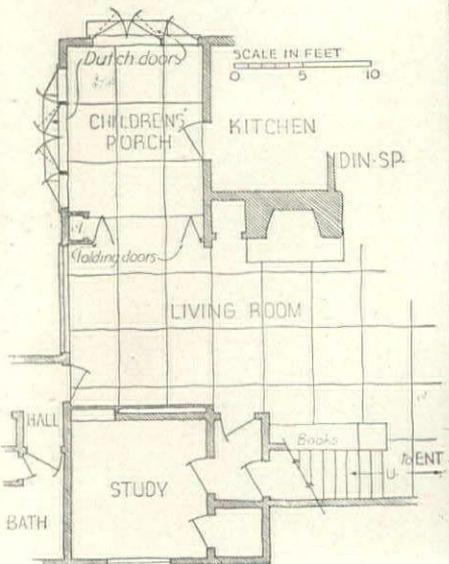


WILLIAM LESCAZE, Architect, New York, N. Y.

Nyholm

CHILD'S PORCH

An almost ideal solution for a child's play area. As shown on the plan, the porch occupies a corner location equally accessible from the living room or the kitchen, reducing the problem of supervision to a minimum. Other advantages of the flexible arrangement lie in the possibility of using the porch for dining or extending the living area. Note the all-glass expression of the old Dutch door idea on the porch.



MICHAEL GOODMAN, Architect, Berkeley, Calif.

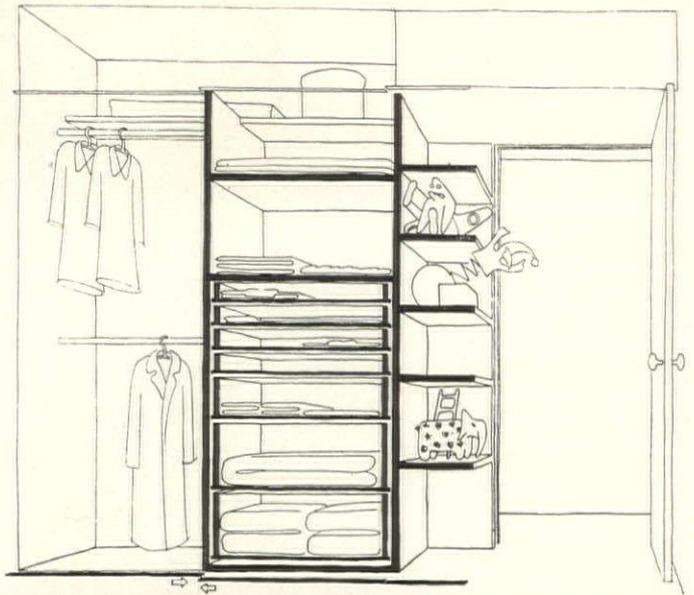
BED - PLAY ROOMS

George H. Van Anda



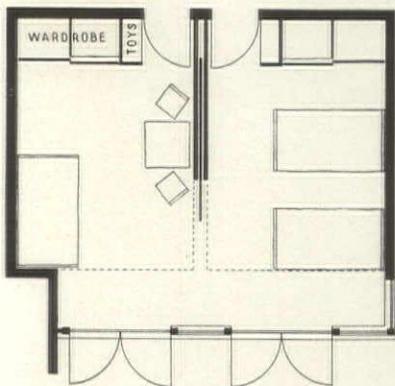
THORNE SHERWOOD, Architect, New York, N. Y.

Two rather awkwardly shaped children's bedrooms in a remodeled farmhouse have been designed for day use as a single large playroom. Separation is provided very simply by a folding partition which can easily be pushed out of the way when desired.



The photograph below and the drawings illustrate a solution for the same problem as above. With the advantage of being able to start from scratch, the architect has produced two completely equipped children's rooms, divided by a sliding partition which extends to the windows.

Fred R. Dapprich



HARWELL HAMILTON HARRIS, Designer, Los Angeles, Calif.



PLANT RAILING

1" o.d. galv. iron water supply
 $\frac{1}{8}$ " holes 1'-0" apart

$\frac{1}{4}$ " Brass drain head
 $\frac{1}{8}$ " holes all around connect
to galvanized iron leader

24 Gauge lead coated galv. iron

2"x6" Cut

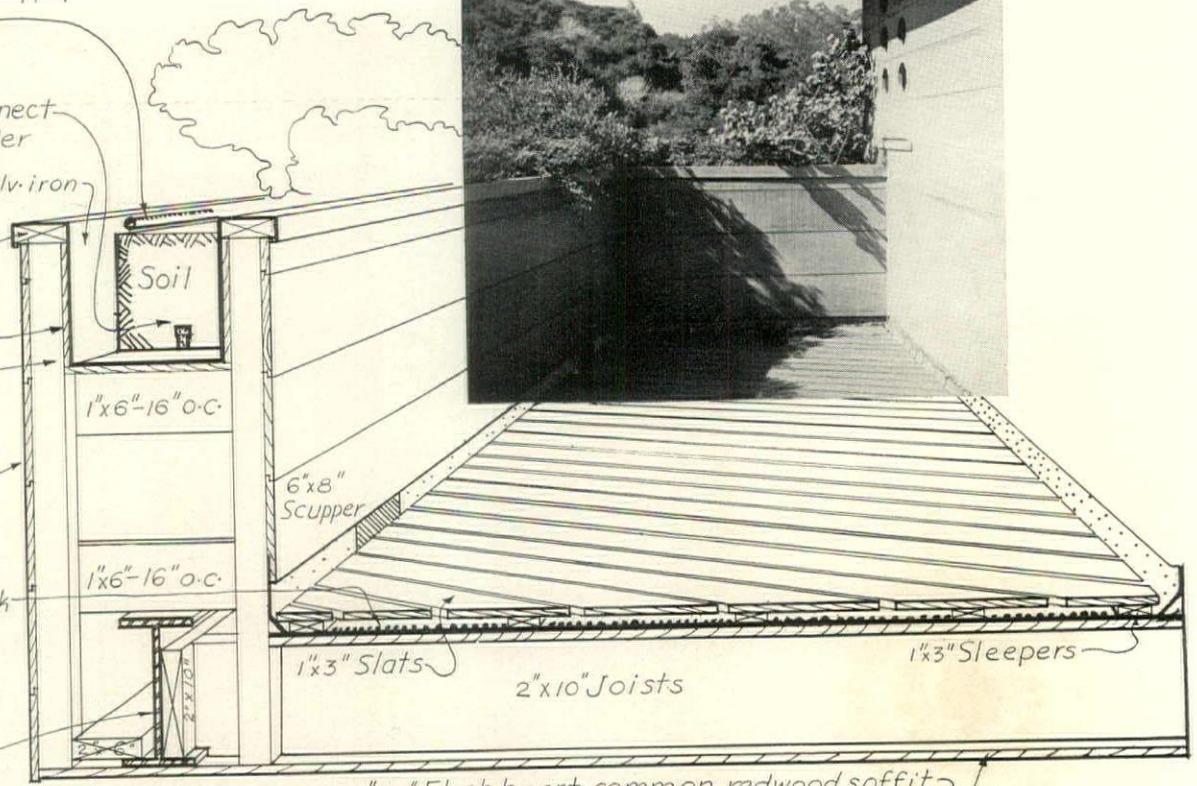
1"x6" Sheathing

2"x3"-16" o.c.

1"x10" Flush
redwood shiplap

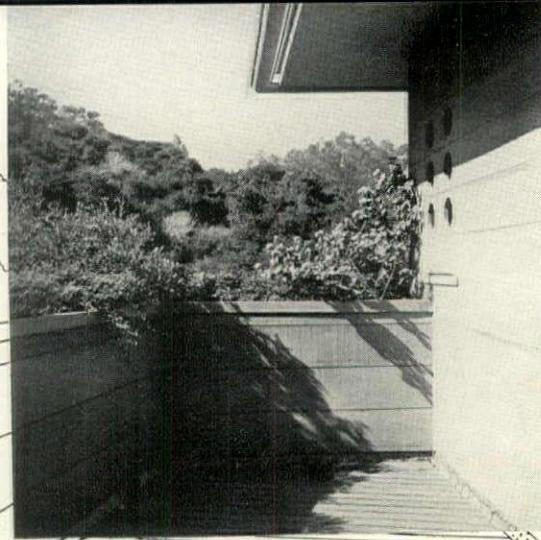
5 Ply tar & gravel deck

12" WF 25#



1"x10" Flush heart common redwood soffit

HERVEY PARKE CLARK, Architect, San Francisco, Calif.



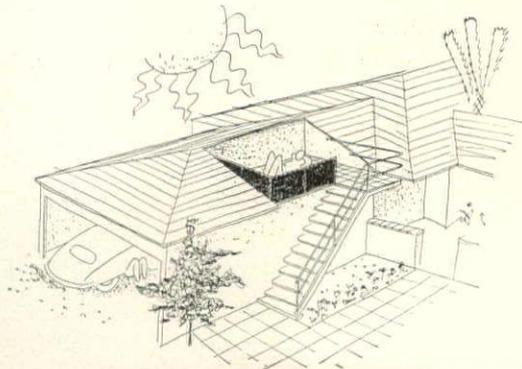
Added privacy is created for this second floor terrace, as well as increased interest, by the provision for plants in the railing. The drawing indicates the construction of the metal plant boxes. An inconspicuous sun deck is illustrated below: set into a pitched roof, the area is protected from wind and undesirable views. It is reached by an exterior stair and has a number of storage lockers at the back.

SUN DECK

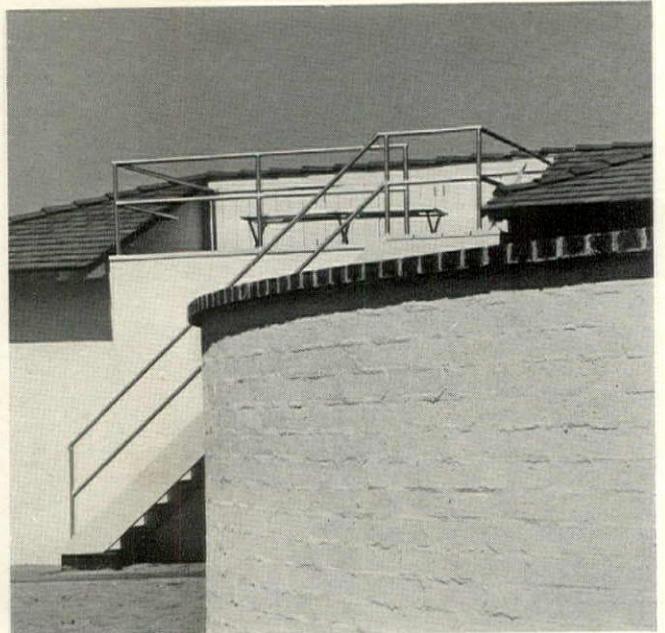
Julius Shulman



PAUL LASZLO, Designer, Beverly Hills, Calif.

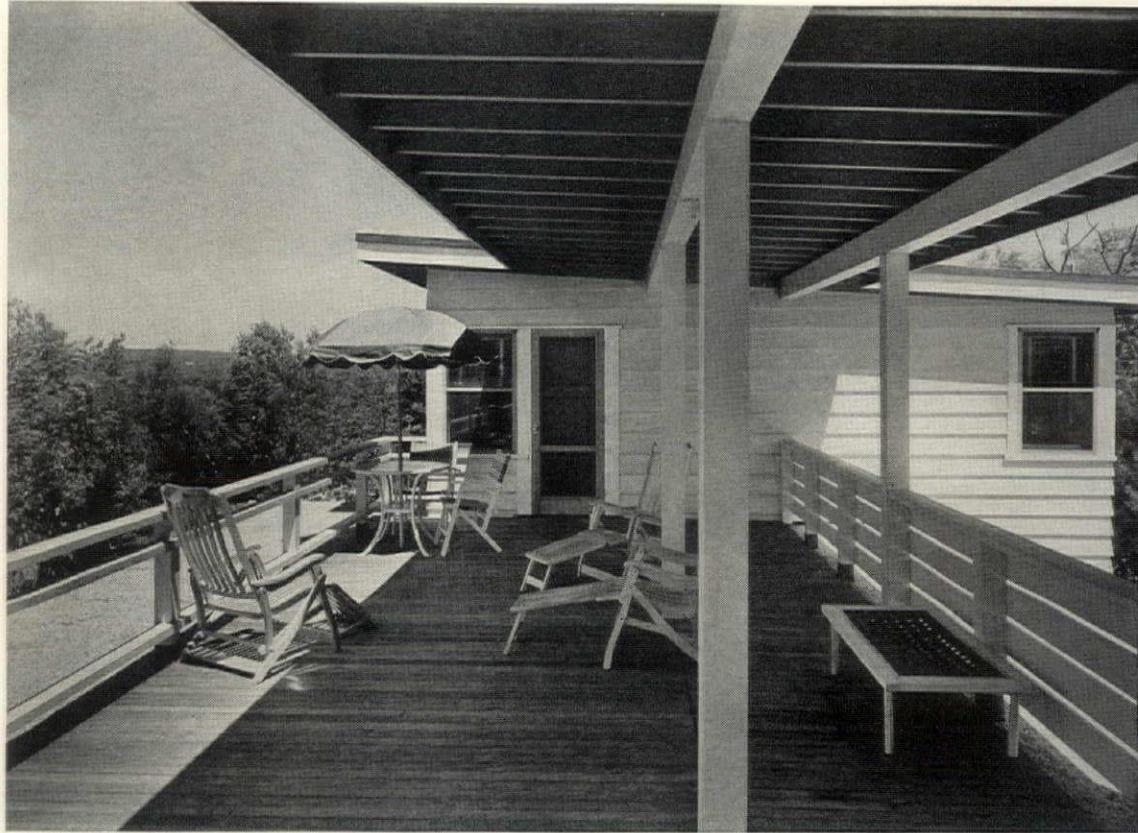
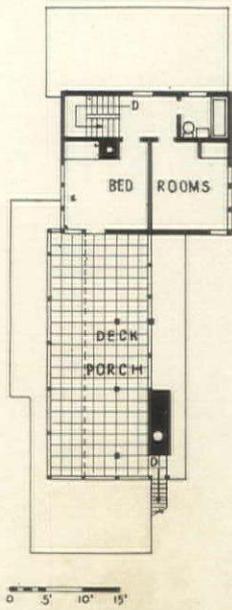


Kahn



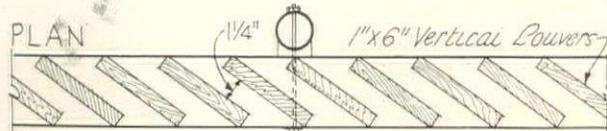
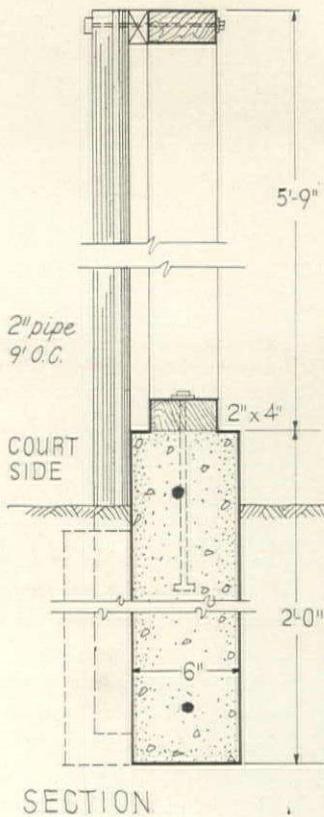
SUN DECK

Samuel H. Gottscho



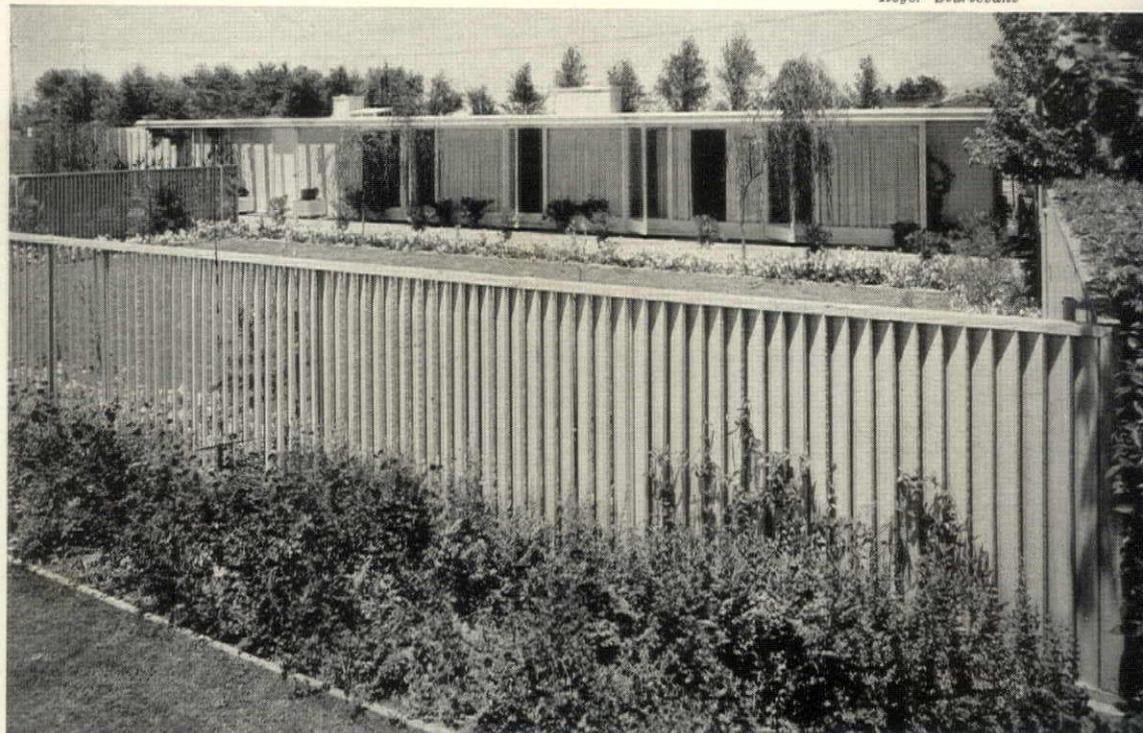
MOORE & HUTCHINS, Architects, New York, N. Y.

The deck shown above would meet almost any requirements of use and cost. It is inexpensive, having a floor of wood slats set above the main roof, and has provision for both sun and shade. An interesting application of the louver principle is found in the fence shown below. The slanted vertical members hospitably provide a view into the front garden, but do not allow passers-by to look into the glazed rooms facing the garden.



LOUVER WALL

Roger Sturtevant



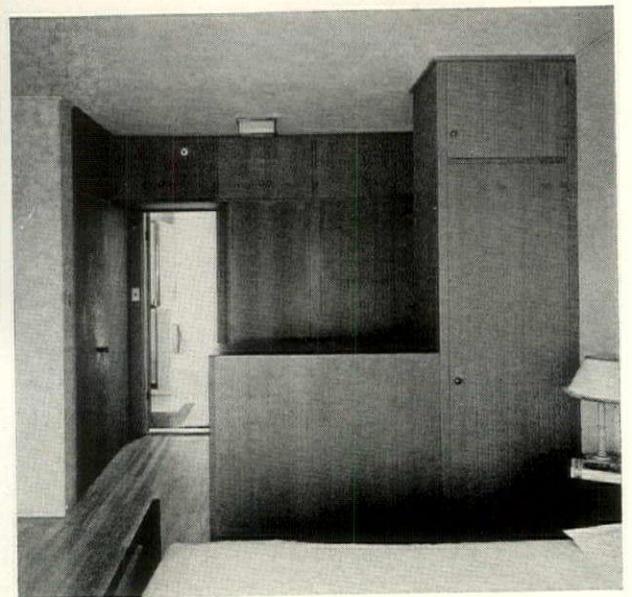
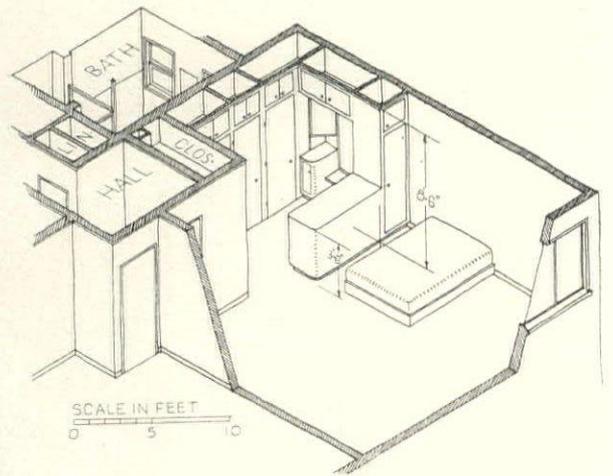
JOHN C. FUNK, Architect, Berkeley, Calif.

DRESSING ALCOVE



MICHAEL GOODMAN, Architect, Berkeley, Calif.

A bedroom with a very well equipped dressing alcove. Good use is made of the drawer unit, which provides a degree of separation from the sleeping area and convenient counter space as well. The dressing table and three-part mirror are also built in.



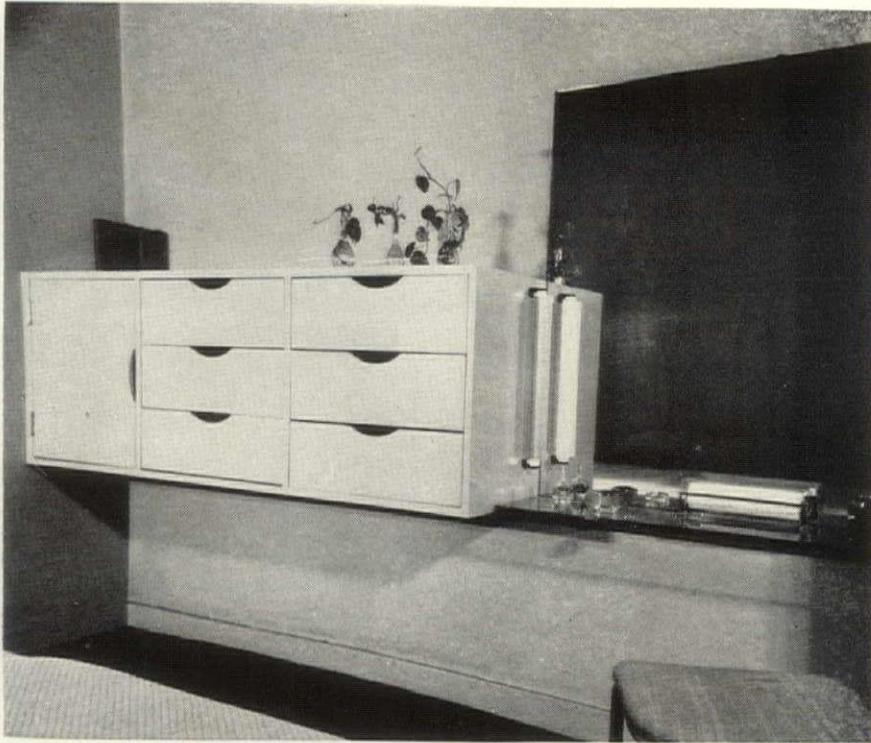
DRESSING TABLE



HARWELL HAMILTON HARRIS
Designer, Los Angeles, Calif.

The dressing table and storage unit, in addition to showing a handsomely designed piece of built-in furniture, have been well studied to perform their required functions. The table itself has adequate drawer space, while the cupboard below is suitable for bulky objects. An interesting feature is the tubular lamp which turns the glass top of the table into the main source of illumination.

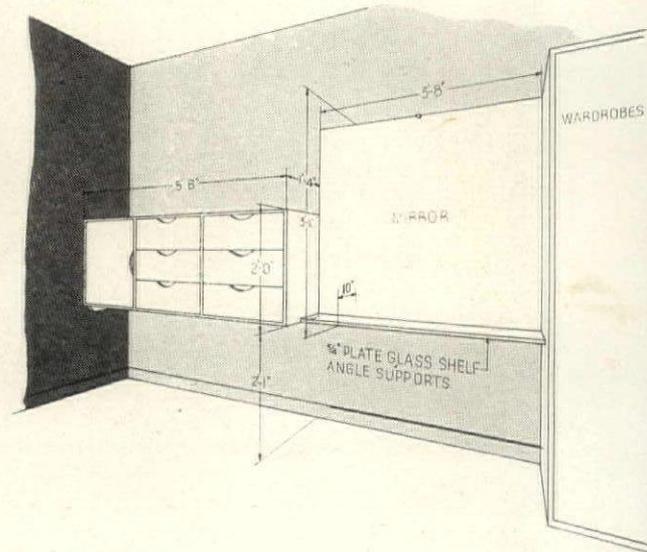
DRESSING UNIT



SANDERS & BRECK, Architects, New York, N. Y.

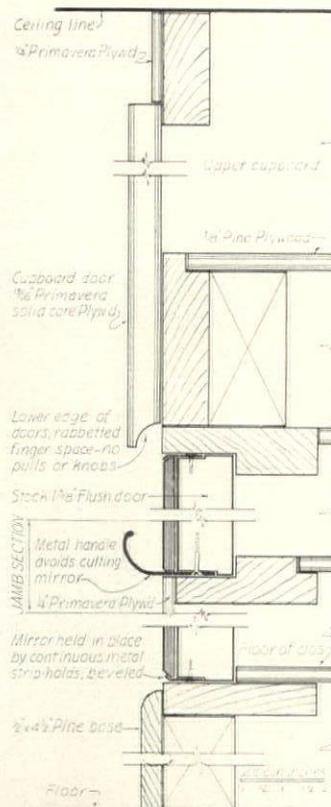
This bedroom wall, except for a door to the hall, consists entirely of closets and cupboards. The most interesting feature is the use of mirrored closet doors, so hinged that they become a three-part full length mirror. Knobs have been omitted from the cupboard doors above and replaced by an exposed bottom edge, rebated to provide finger space.

The tendency to take drawers, cupboards and bookshelves off the floor and to put them at a usable height is all to the good. In this case, while not directly serving the dressing table, the trays and cabinet form a designed unit with it. The needed light is provided by frankly exposed lumiline lamps.



MIRRORED CLOSET DOORS

Richard Garrison



GEORGE KOSMAK, RUTH GERTH & ASSOCIATES
Architects and Designers, New York, N. Y.

CHILD'S ROOM



GEORGE FRED KECK, Architect, Chicago, Ill.

Hedrich-Blessing

The storage unit below is as admirable for the excellent lighting as for its design. Lightweight doors, fitted with two finger-pulls, slide in wood tracks. The closet behind is of the shallow type with no special equipment beyond the shoe rack, recessed between the studs.

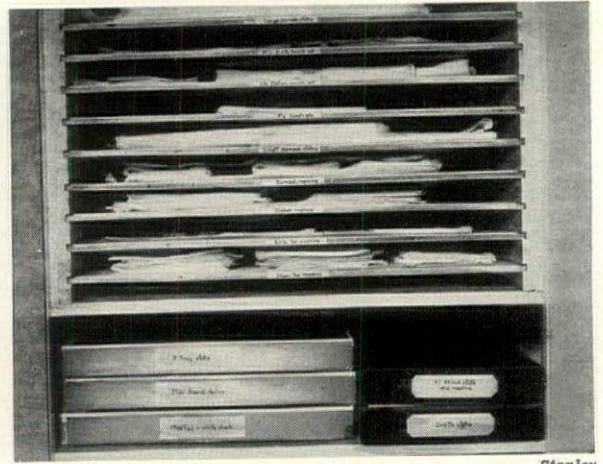
CLOSET AND DRESSER

Fred. R. Dapprich



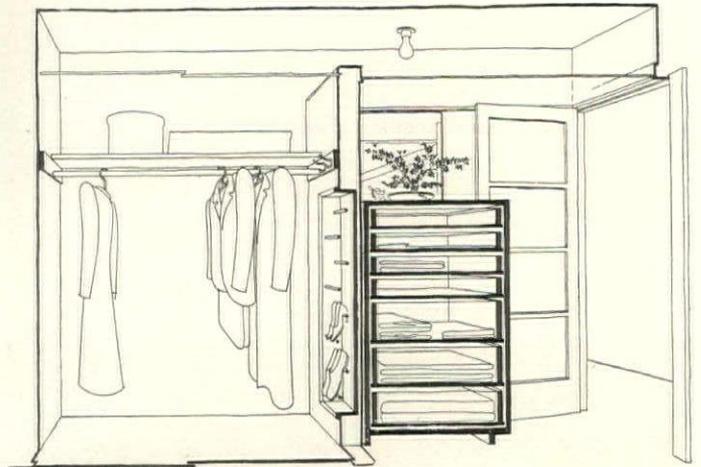
H. H. HARRIS, Designer,
Los Angeles, Calif.

LINEN CLOSET



Stanley

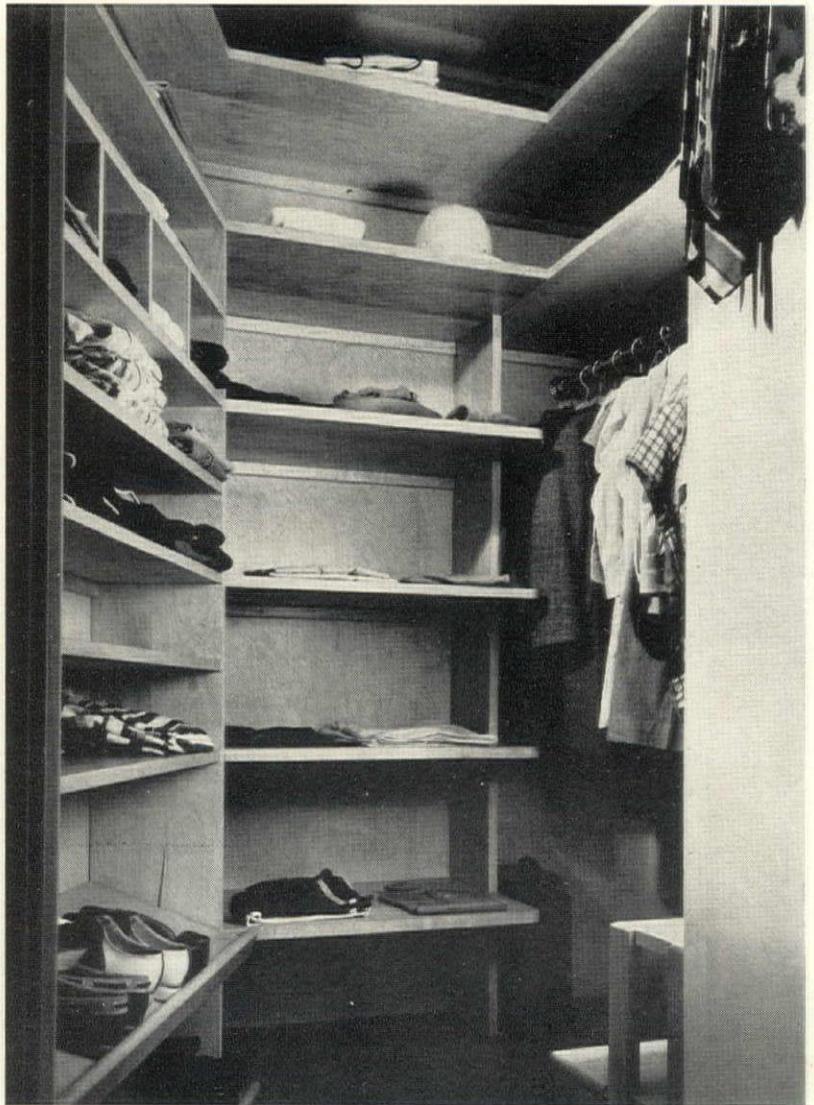
At the left is a very completely equipped child's room fitted with small scale movable furniture. The built-in features, such as the bureau, have naturally been made adult size. The use of many narrowly spaced shelves (above) is an obvious solution for a linen closet, but all too frequently overlooked. For convenience the shelves have been designed to slide out.



DRESSING CLOSET

Ezra Stoller

A closet of irregular shape has here been adapted in a simple manner to provide for all the requirements of clothes storage. Since it can be closed off from the bedroom, there was no need to provide drawers.



WALTER GROPIUS & MARCEL BREUER, Associated Architects

Mr. Koch remarks that curtains were used for economy of space and money. "These usually are unattractive, but I think they can look better than regular doors." In this instance the curtains when drawn form a pleasant link between the painted and rough stone walls. The drawing at the lower right shows a simple, convenient closet in which the lower part contains a laundry hamper that can be reached from either dressing room or hall.

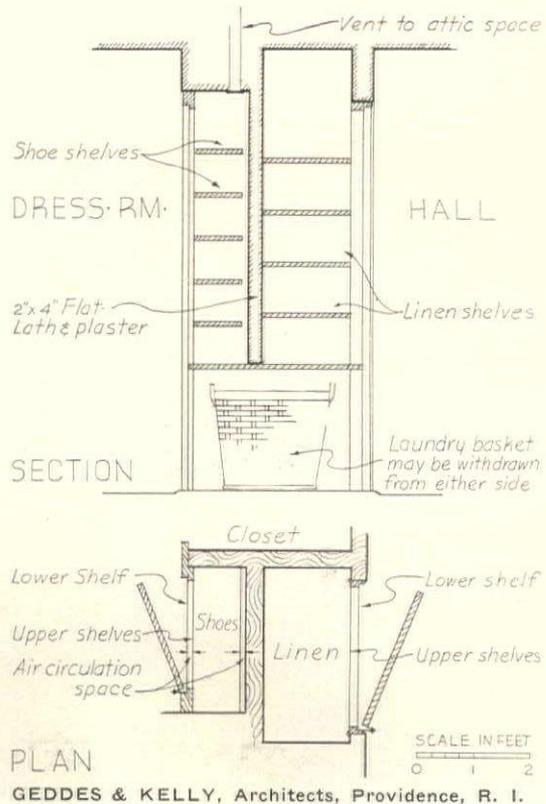
CURTAINED CLOSET

Ezra Stoller



CARL KOCH, Architect, Belmont, Mass.

TWO-WAY LAUNDRY CLOSET

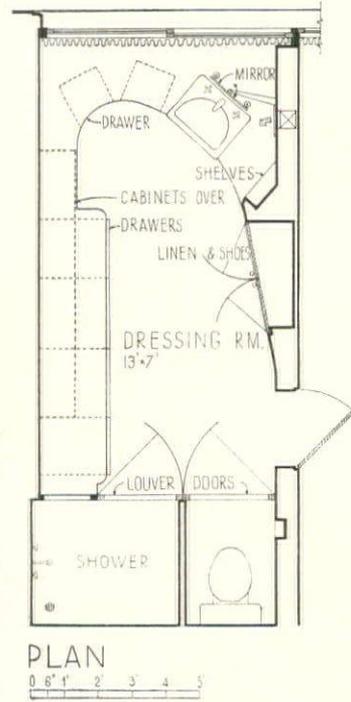


GEDDES & KELLY, Architects, Providence, R. I.

BATH-DRESSING ROOM



WILLIAM HAMBY, GEORGE NELSON, Architects, New York, N. Y.

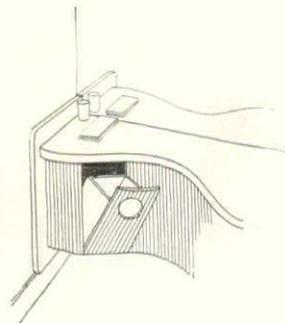


Francis G. Mayer Photos



GUEST LAVATORY

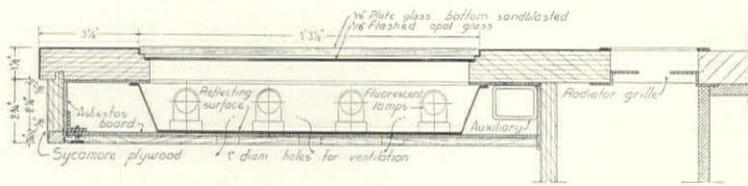
Richard Garrison



GEORGE KOSMAK, RUTH GERTH & ASSOCIATES, Architects and Designers

The two views above show a luxury dressing room and bath, designed to fit a long and narrow space. The lavatory is built into a continuous counter covered with plastic tile. Louver doors enclose the shower and water closet. Lighting is provided by inside-silvered lamps in open aluminum reflectors set flush with the ceiling. The reflector nearest the shower contains a heating unit. At the left is another built-in lavatory, with the counter shaped to make the most of a restricted space. The sketch shows the hamper for soiled linens.

DRESSING TABLE

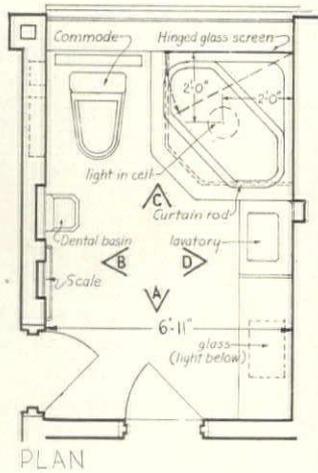


Ezra Stoller Photos

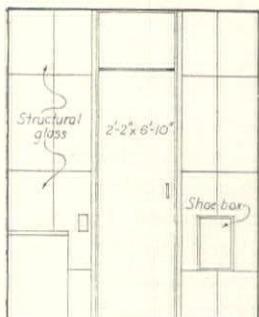
BATHROOM



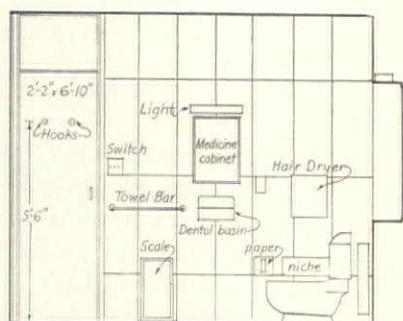
The illustrations on this page show a bath and a dressing unit, both in the same house, which represent a high point in finish and completeness of equipment. The bath is faced with walls of structural glass, and has a dental lavatory, built-in scales, a hair dryer and a dressing table. Both tables shown have lighting elements set under counter tops of sandblasted plate glass.



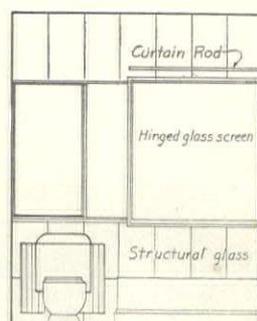
WALTER GROPIUS & MARCEL BREUER, Associated Architects, Cambridge, Mass.



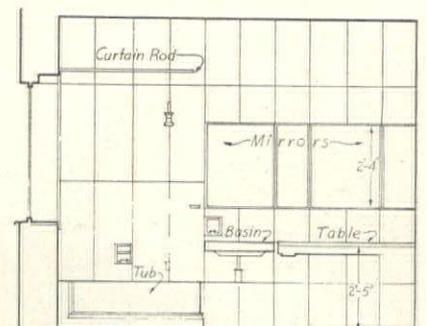
ELEVATION A



ELEVATION B



ELEVATION C



ELEVATION D

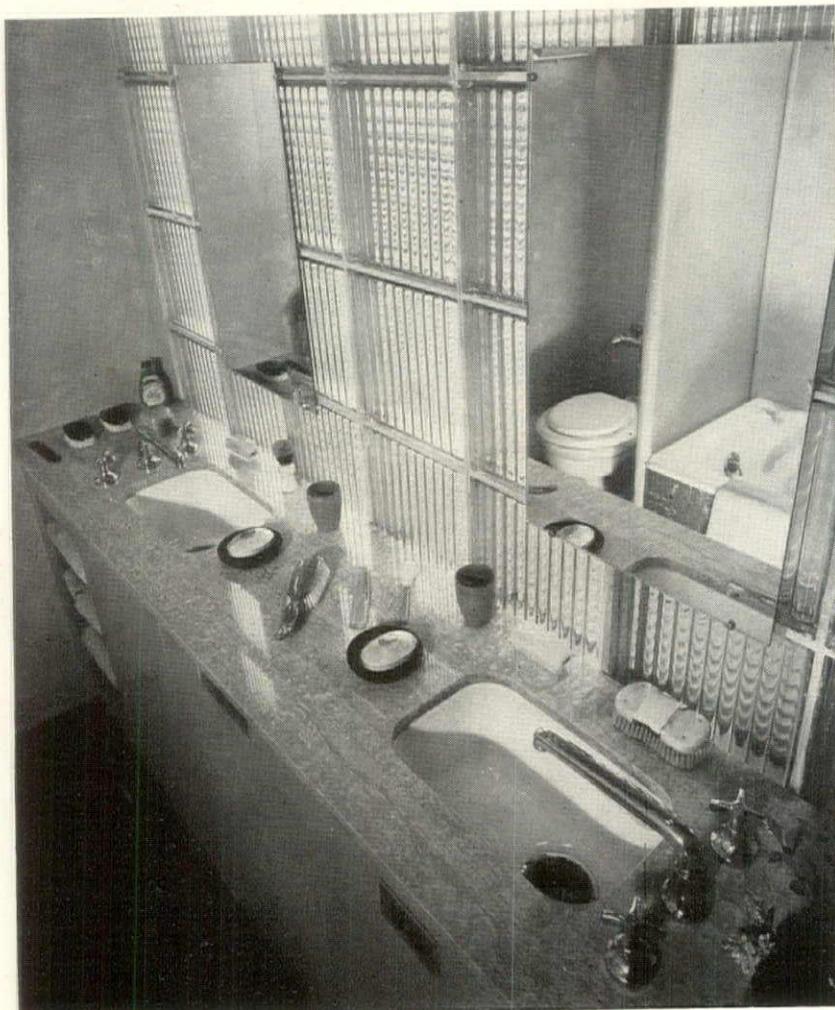


COMMITTEE ON ALLIED ARTS, Designers, New York, N. Y.

LINEN SHELVES

The notion that the smallest possible bathroom is necessarily the most efficient is fortunately giving way to arrangements emphasizing spaciousness and convenience. Provision of linen shelves, as in the example at the left, is a small item of expense, but adds a great deal of livability.

DOUBLE WASHBOWLS



EDWARD D. STONE, Architect, New York, N. Y.

Ezra Stoller

GLASS BLOCK SHIELD

Hedrich-Blessing Photos

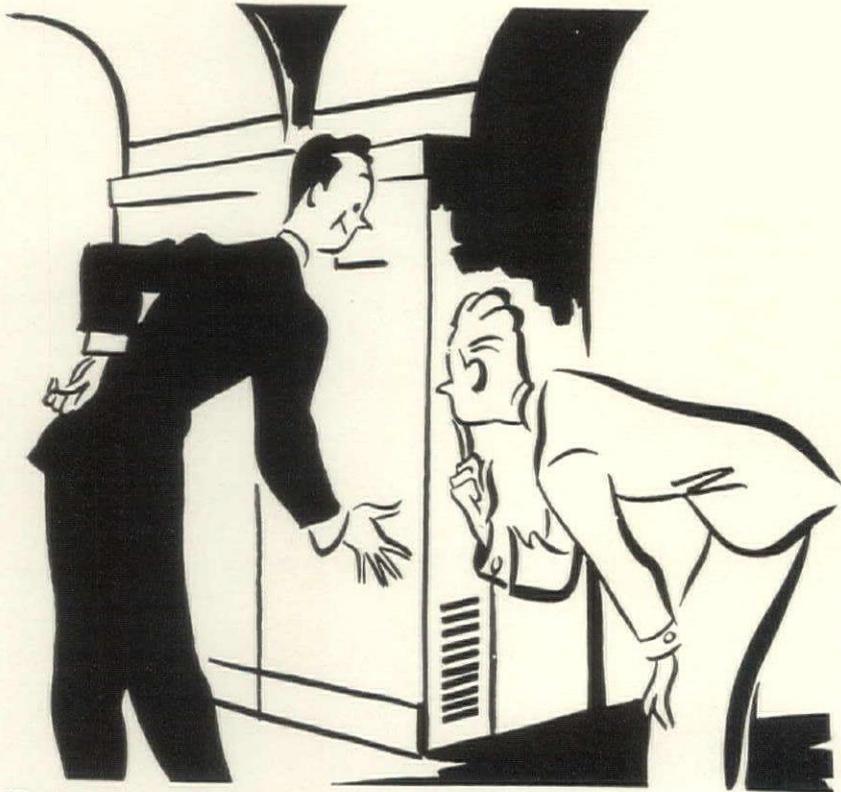


WINSTON ELTING, Architect, Chicago, Ill.

Glass block, an exceedingly appropriate material for bathrooms because it is so easy to clean, here forms a tub enclosure which simplifies curtaining without cutting off daylight from the end of the room.

Many of the advantages of an extra bathroom can be realized by the provision of an additional washbowl—the least expensive fixture in the room. Plenty of shelf space around the bowls is an equally desirable feature, while the large glass block panel provides plenty of daylight for shaving without loss of cabinet space or sacrifice of privacy.

"What's G-E got that other furnaces ain't got?"



Here is the *combination* of features developed for G-E Winter Air Conditioning that has earned General Electric such an enviable reputation:

- The G-E heat-trap design and G-E impact-expansion atomization combine to create high operating efficiencies, low operating costs. Owners of G-E Oil Winter Air Conditioners report savings of 25 to 50% on fuel costs.

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Give your clients years of trouble-free service and satisfaction. Get the details on the complete G-E line of heating and air conditioning from Sweet's Catalog ²⁶/₁₁, or write to General Electric, Div. 1013, Bloomfield, N. J.

GENERAL  ELECTRIC

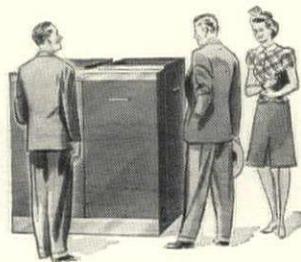
TURN TO



... for the complete line of Heating and Air Conditioning

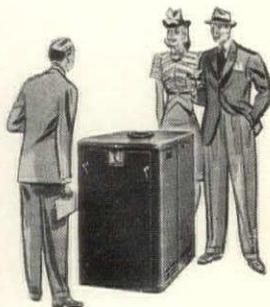


G-E Oil Furnaces—(steam, hot water, vapor) seven different sizes for various heating capacities. Year 'round domestic hot water coil optional.

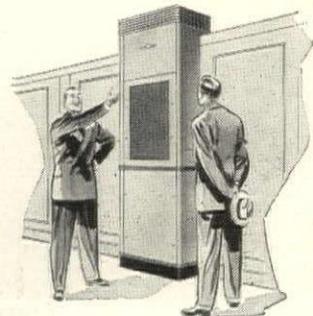


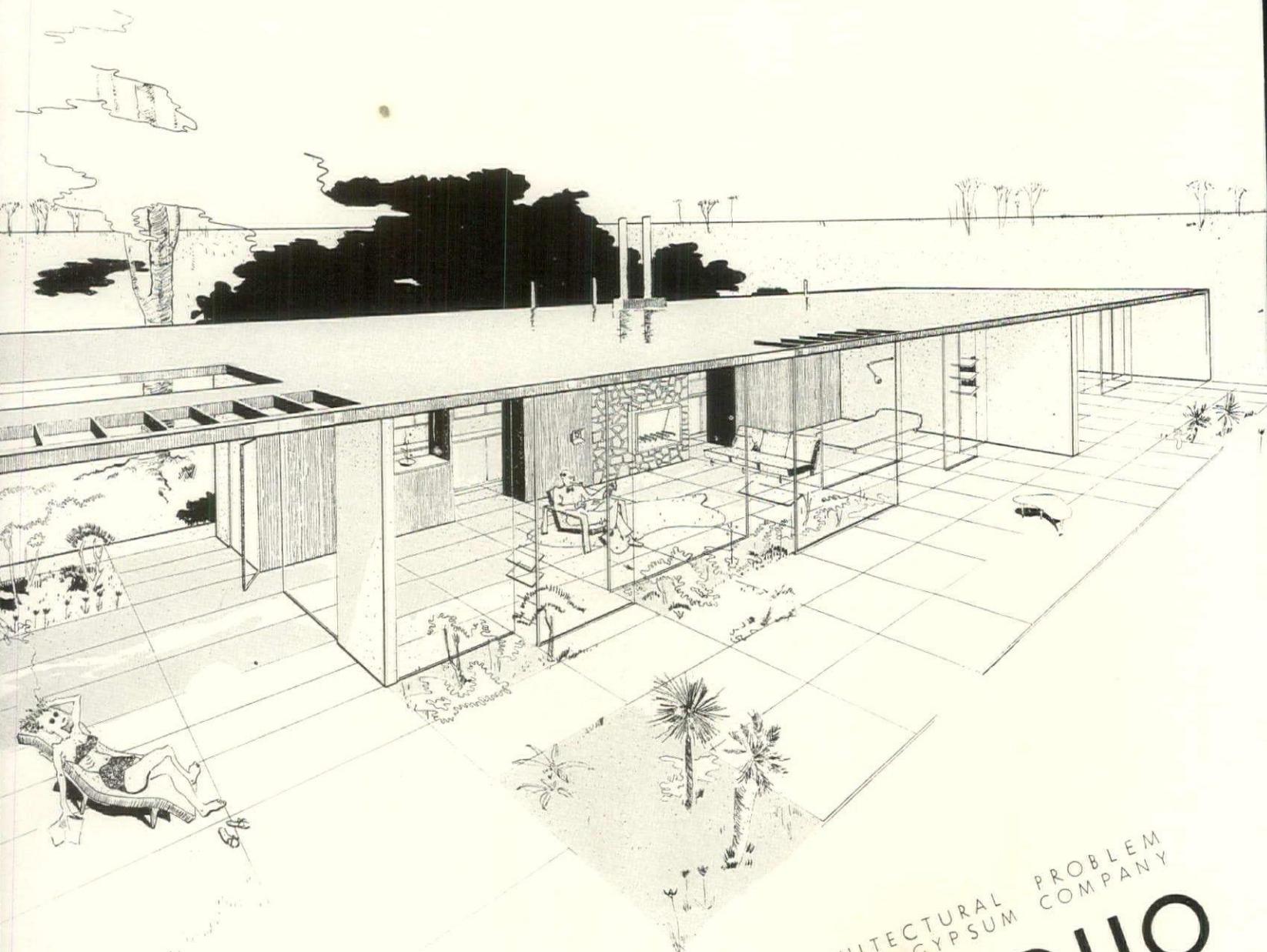
G-E Winter Air Conditioners—(oil or gas fired) circulate warm, clean, moistened air. Highly efficient. A single switch provides circulation in summer. Cooling equipment can be added.

G-E Gas Furnaces—for residential, commercial and industrial applications. Capacities range from 76,000 Btu output per hour to 1,372,000 Btu per hour.



G-E Unit Air Conditioners—for low-cost air conditioning in shops, restaurants, offices, etc. Complete range of sizes. Low in cost. Easily installed, little or no duct work needed.





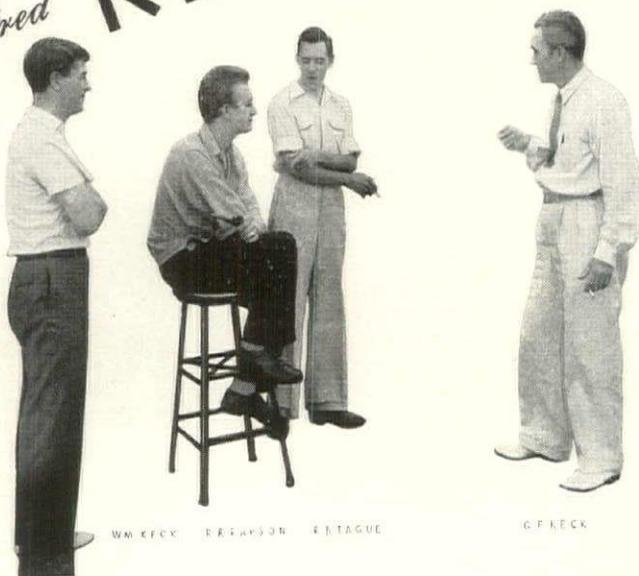
SOLUTION TO AN ARCHITECTURAL PROBLEM
 FOR THE UNITED STATES GYPSUM COMPANY

George Fred **KECK** *plans the* **TRANS-DUO**

- after several meetings with sociologist hugh duncan of the university of chicago, i became convinced that basic changes are necessary in the plan of the contemporary house: here are some of our observations:
- 1 - the adult-parents have fixed habits
 - 2 - children are given more independence today
 - 3 - the adolescent needs his own rooms to entertain his friends in his house
 - 4 - the adult child (college student) still lives with his parents
 - 5 - the adult child may live with his parents indefinitely
 - 6 - the young married couple may not have achieved financial independence from the parents
 - 7 increased leisure for all the family indicates a desirability of more definite physical separation of its elements.
 - 8 medical science has increased the life span and elderly people must have independent (though small) quarters.

the plan is an attempt to solve these contemporary problems and to give more freedom of action to various members of the american family unit.

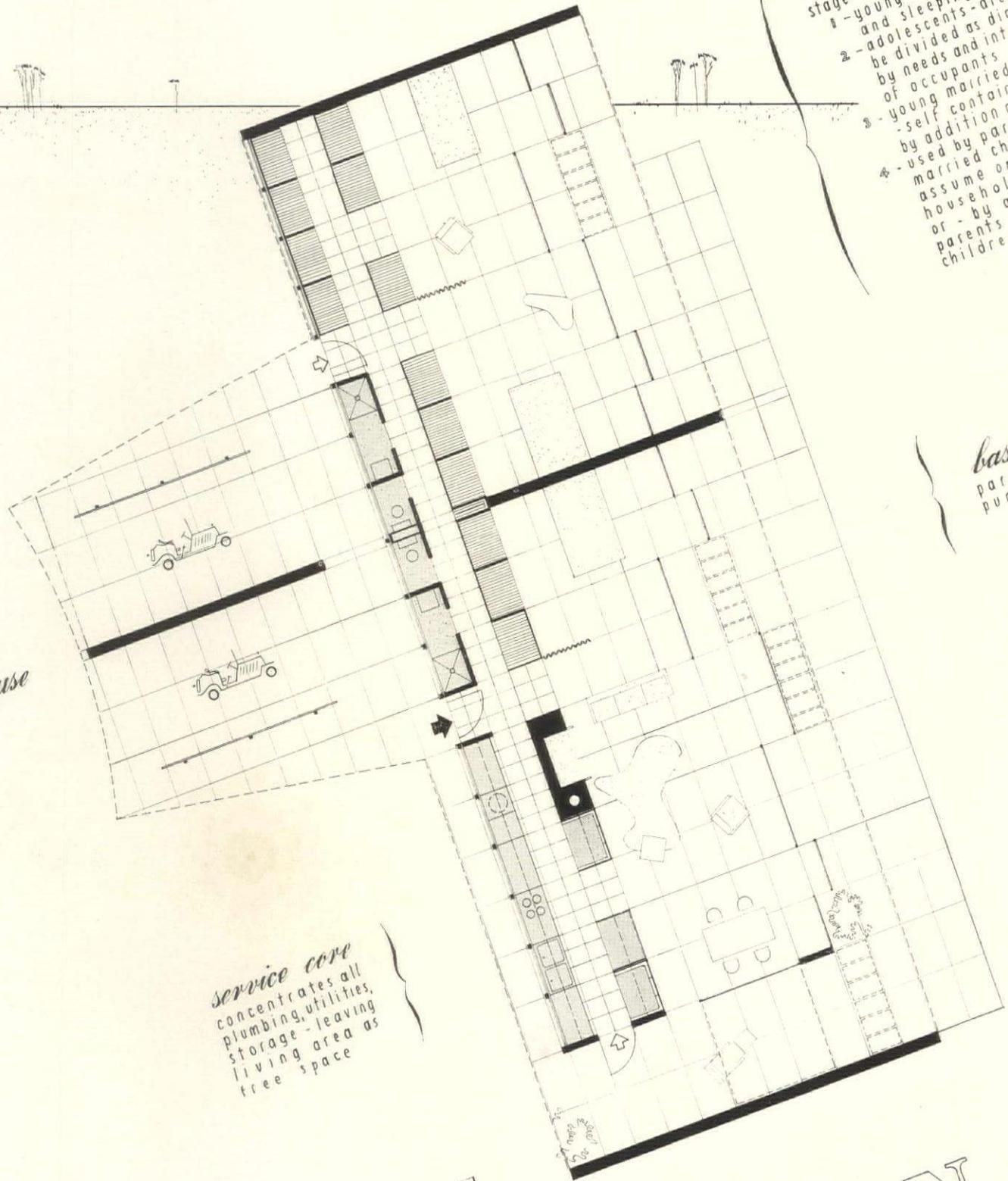
George Fred Keck



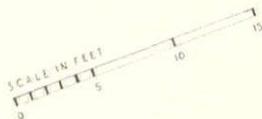
WM KECK R. BRAYSON R. TAGUE

G. KECK

house



service core
 concentrates all
 plumbing, utilities,
 storage - leaving
 living area as
 free space



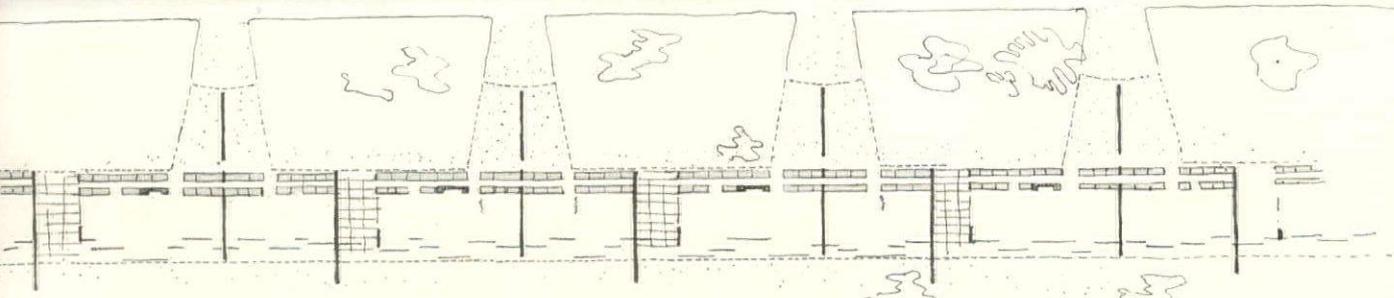
transitional unit
 stage

- 1 - young children - play and sleeping space
- 2 - adolescents - area may be divided as dictated by needs and interests of occupants
- 3 - young married couple - self contained unit - addition of kitchen
- 4 - used by parents when married children assume operation of household - or - by aged grand-parents as married children move away

basic unit
 parents' multi-purpose room

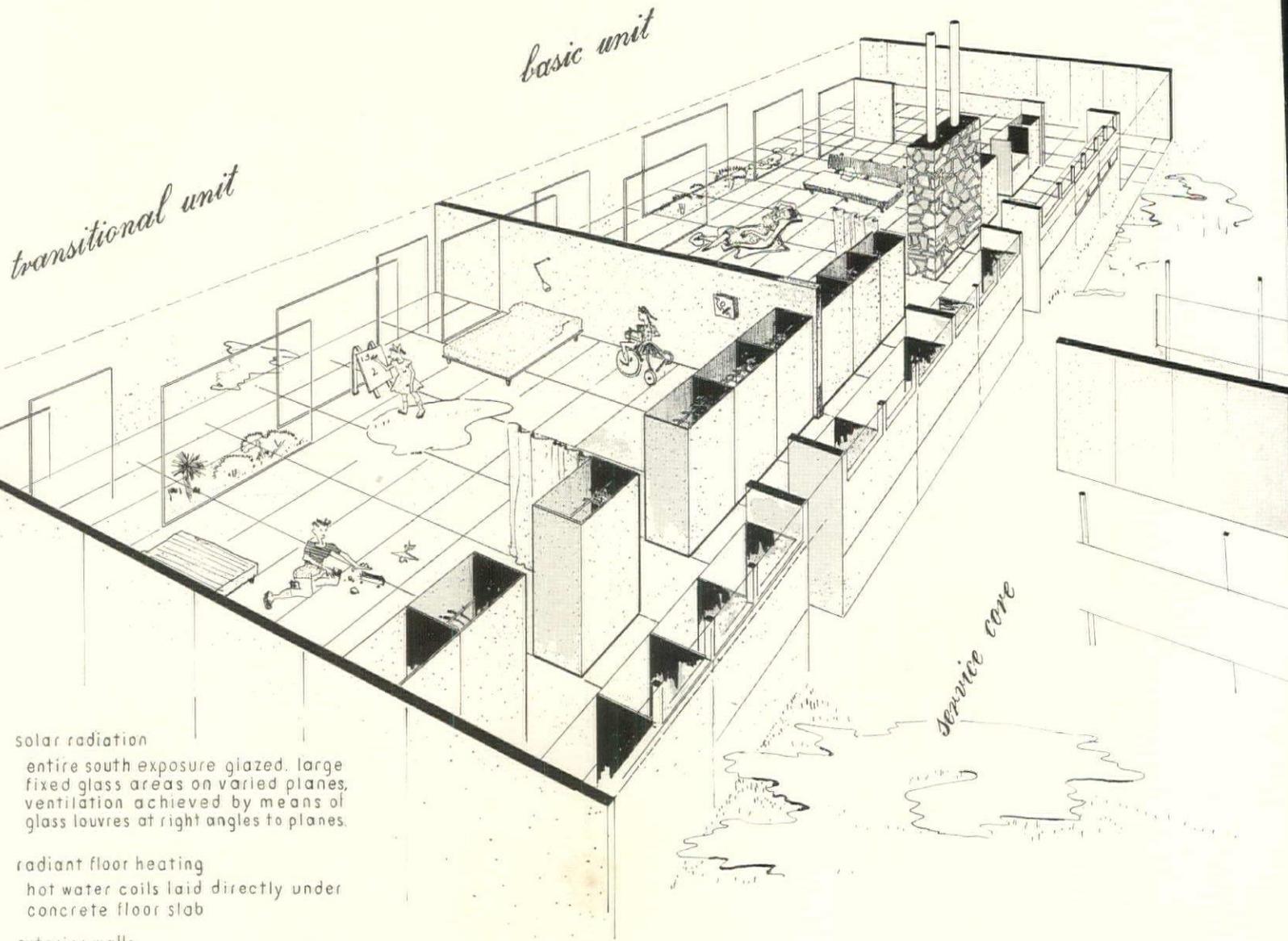
5

th in the series of solutions to timely problems. these USG presentations have two objectives. first - to encourage, promote and publicize original thinking, designing, and planning. second - to illustrate and explain how new materials and construction methods, developed by laboratory and field research, contribute to better, safer building, and lower cost. greater strength, added fire protection, more comfort, safety, broad decoration opportunities, plus faster application, are all possible with these materials and methods. you will see more studies in future issues of the FORUM. look for them - and please don't hesitate to comment or criticize any of them.



ROW HOUSING

diagrammatic sketch demonstrating the adaptability of the TRANS-DUO house to row housing



solar radiation

entire south exposure glazed. large fixed glass areas on varied planes, ventilation achieved by means of glass louvers at right angles to planes.

radiant floor heating

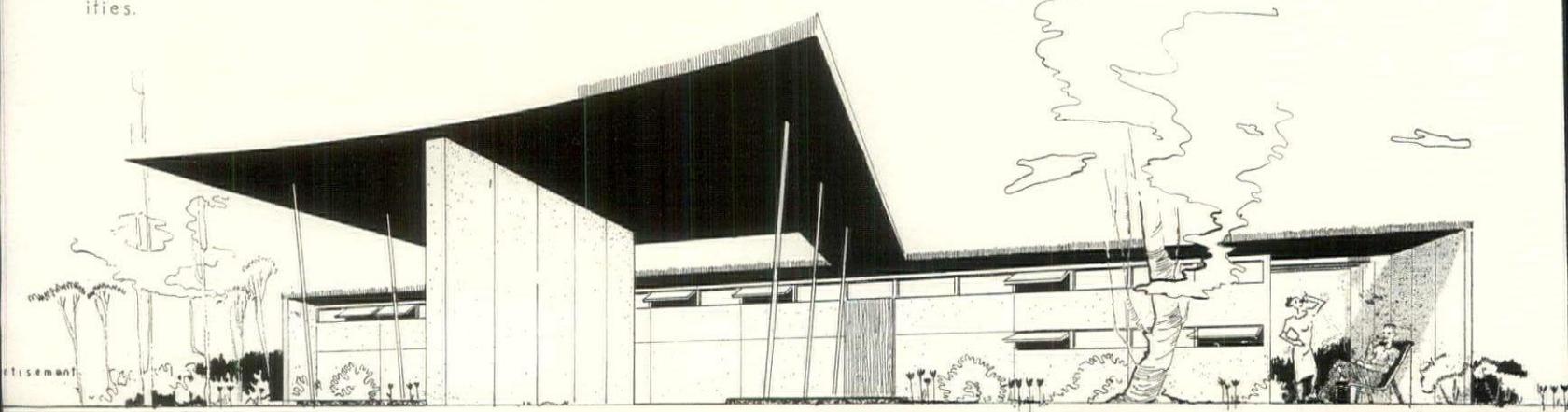
hot water coils laid directly under concrete floor slab

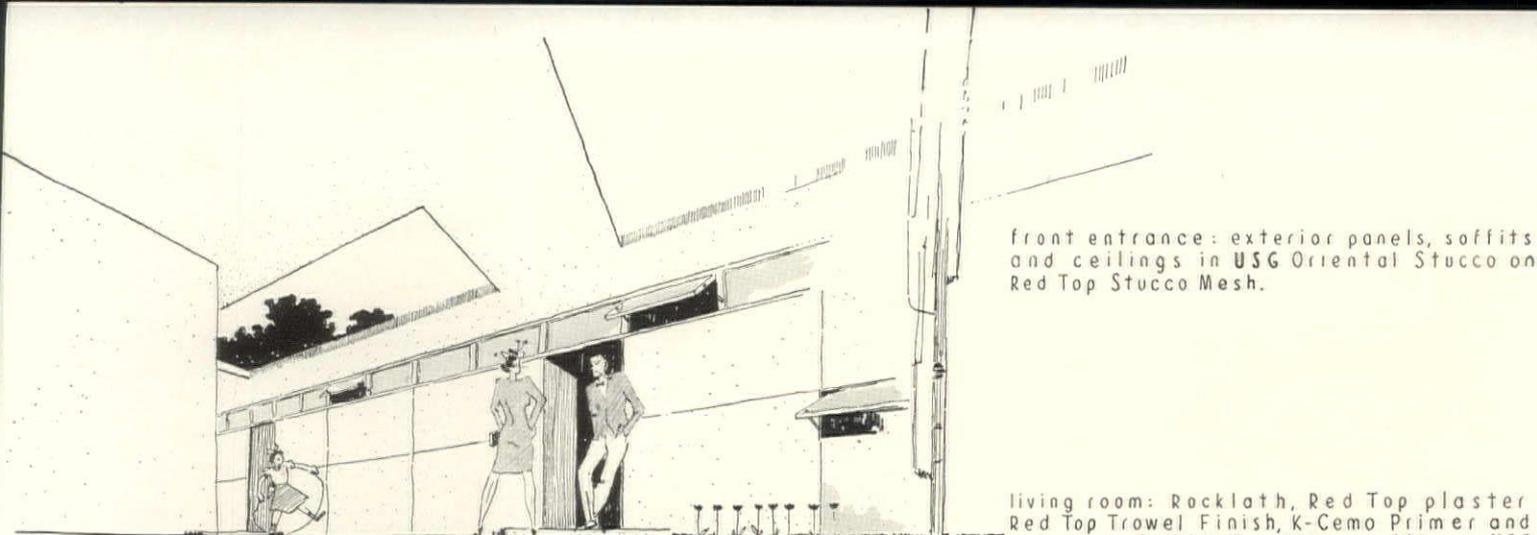
exterior walls

prefabrication of wall units, oriental exterior stucco with galvanized iron sheet metal spacers.

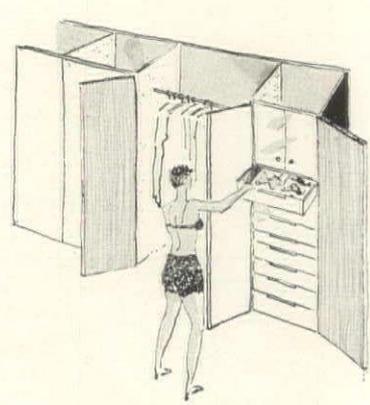
partition cabinets

prefabricated cabinets of u.s.g. hardboard provide flexible partitions and house all service facilities.





front entrance: exterior panels, soffits and ceilings in USG Oriental Stucco on Red Top Stucco Mesh.

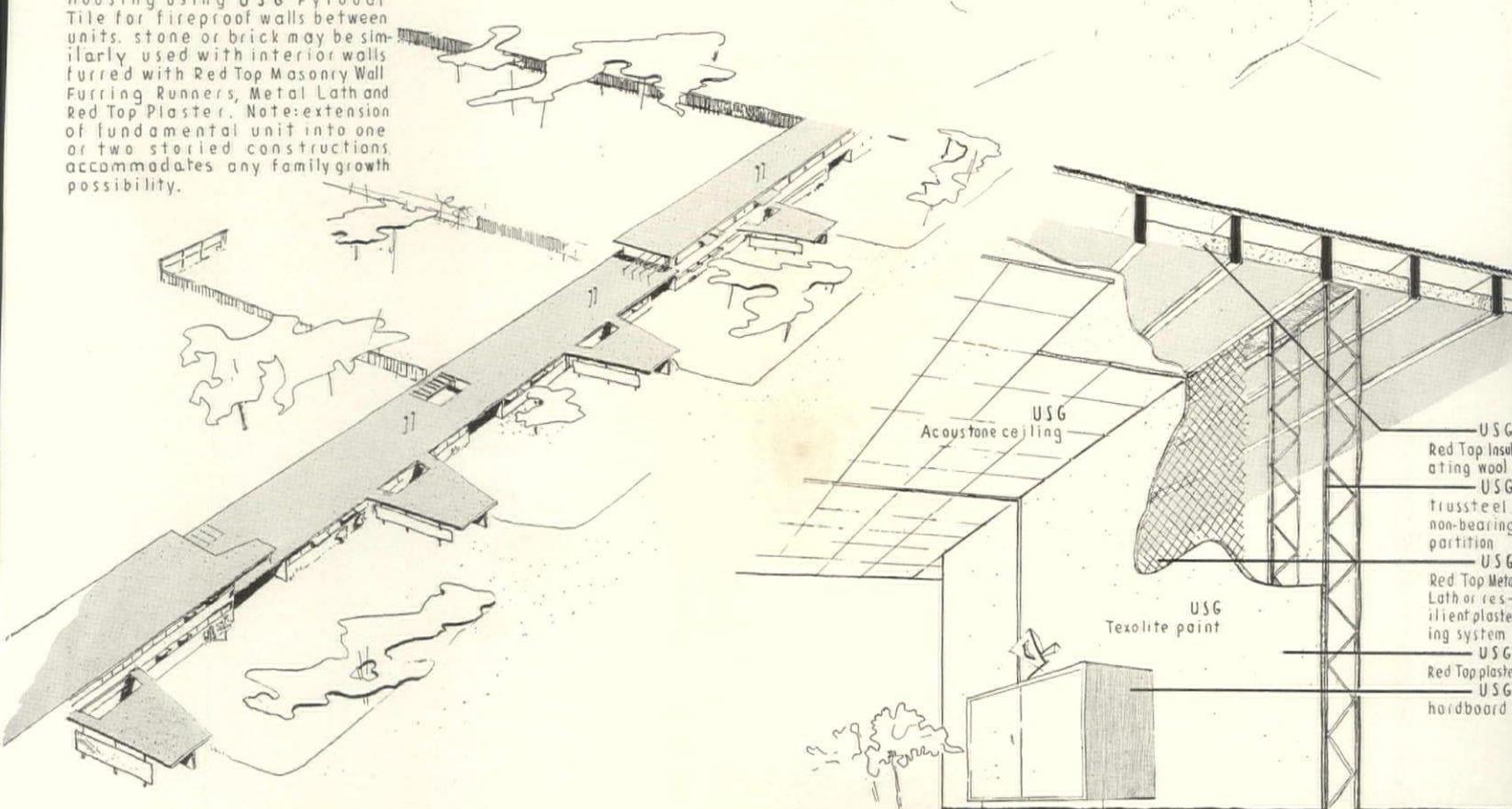


dressing wardrobes, cabinets, and storage spaces are made of USG Weatherwood Hardboard at mill or built on job; both sides of USG Hardboard are finished and require no painting, if the dark brown tones are unsuitable - USG Hardboard may be painted, varnished, stained or enameled in any manner. kitchen cabinets of Weatherwood Hardboard, similarly made, are enameled.

living room: Rocklath, Red Top plaster Red Top Trowel Finish, K-Cemo Primer and one coat of USG Texolite; ceilings USG Acoustone, Perfatone, Quietone, or Sabinite Acoustical Plaster depending on budget requirements. large glass areas and relatively large cubic capacity make acoustic treatment advisable for both quiet and proper radio reception.



design fully adaptable to row housing using USG Pyrobar Tile for fireproof walls between units. stone or brick may be similarly used with interior walls furred with Red Top Masonry Wall Furring Runners, Metal Lath and Red Top Plaster. Note: extension of fundamental unit into one or two storied constructions accommodates any family growth possibility.



- USG Red Top Insulating wool
- USG truss steel non-bearing partition
- USG Red Top Metal Lath or resilient plastering system
- USG Red Top plaster
- USG hardboard

These materials are more fully and usefully described on the following pages in 1941 Sweet's Architectural Catalogs: Oriental Stucco pg. 22, Stucco Mesh pg. 14, Rocklath pg. 12, plaster pg. 20 Metal Lath pg. 14 all in section 9 catalog 17; USG paints in section 17 catalog 29; Weatherwood Hardboard section 11 catalog 44; Acoustical Material section 10 catalog 49; Insulation section 1a catalogs 12, 25; Pyrobar section 4 catalog 48; Sheet-rock Tile Board section 11 catalog 44.

USG
Where research develops better, safer, building materials

UNITED STATES GYPSUM COMPANY
300 WEST ADAMS STREET, CHICAGO, ILLINOIS

USG
plaster lath lime insulation paint wallboard siding sheathing roofing



And your clients will **get** both, if your specifications call for Kinnear Rolling Doors. For, like a window shade, these doors open straight upward — quickly, smoothly and easily—coiling compactly out of the way above the lintel. Yet they are **rugged, all-steel** doors that resist the elements and withstand terrific punishment year after year!

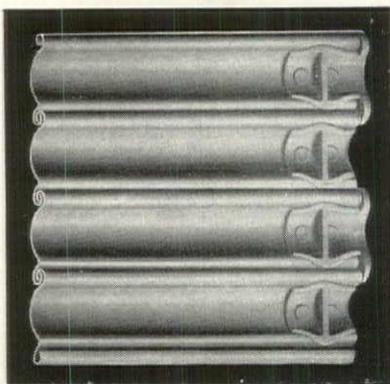
Their upward, coiling action offers numerous advantages. It saves all floor and wall space around the door area . . . prevents the doors from being hampered by snow, ice, swollen ground, or nearby objects . . . leaves ceiling space completely clear for overhead equipment . . . doesn't cut off

light from **any** overhead source . . . and keeps the door out of reach of damage by wind or trucks when open! And Kinnear Rolling Doors are ideally suited in design for the added convenience of motor operation.

In addition, Kinnear's all-steel construction makes these door advantages **last longer** — with **lowest** maintenance costs! It gives your clients extra protection against fire, intrusion, sabotage, riot, the elements, and so on. You make sure of complete door satisfaction when you specify Kinnear Rolling Doors. Write for details today, or see Sweet's. The Kinnear Mfg. Co., 1640-60 Fields Avenue, Columbus, Ohio.

THE INTERLOCKING SLAT MAKES IT POSSIBLE!

The interlocking, steel-slat construction (originated by Kinnear) is the key to the Kinnear Rolling Door's unique combination of durability and convenience! The slats feature free-acting joints that coil easily in either direction, yet shed water perfectly. They form a resilient curtain that "absorbs" horizontal impact and withstands long, hard use. Clearance at each joint permits a slight telescoping of the curtain from top to bottom, which "cushions" the door when lowered, and lets the bottom of the door adjust itself to any slight slope between jambs! And they have many other inherent advantages.



**SAVING WAYS
IN DOORWAYS**

**KINNEAR
ROLLING DOORS**

PRIORITIES

(Continued from page 2)

MECHANICS

Besides the program's keyman and its extent, the operating mechanics also appeared through the fog of defense last month. Herewith the gist of OPM's procedure for preference rating of privately financed defense housing projects:

►Ratings will be graduated as indicated above, the highest ratings going to projects under construction on September 1 and to proposed remodeling and rehabilitation projects. Lower ratings will be granted to new construction for rent; still lower ratings, to new construction for sale.

►To be eligible for ratings, housing must be: 1) Located within reasonable commuting distance of a source of defense employment which, in turn, must be within an officially designated "Defense Housing Critical Area." Covering 275 localities, these areas are somewhat more numerous and broader than the areas already designated by FHA for defense housing mortgage insurance eligibility under its Title VI program. 2) Intended, suitable and available for defense workers. 3) Offered for sale or rent at prices within reach of local defense workers. Maxima, except under special circumstances, are \$6,000 and \$50 per dwelling unit per month, respectively.

►Preference ratings will apply *only* to materials and items of equipment included in the "Defense Housing Critical List" and only in such quantities as OPM may permit. (See list on p. 60.)

►To obtain a preference rating, the builder must file an application with the priority order in quintuplicate with his local FHA office, certifying 1) that critical items are necessary to completion of the project, 2) that substitutes and alternate sources of supply are unavailable, 3) that the requested quantities and delivery dates are not greater nor earlier than required and 4) that, in the case of a remodeling or rehabilitation project, the operation is to increase the building's habitable living accommodations.

►This application must further certify that all eligibility requirements are met.

►It must also be accompanied by a set of drawings and specifications showing the design and materials for the project.

►While local FHA officials must, finally, complete a form at the end of the application, they will not indicate on it that the property in question has or has not been approved for mortgage insurance under the National Housing Act. FHA will merely assist OPM's Priorities Division in its field work; there will be no connection between FHA's priorities and insurance activities.

While it was also disclosed that certain localities would be designated as more critical than others and that projects in

(Continued on page 60)

Servel means savings for Builders and Tenants

*Gas Refrigeration's
freezing with
No Moving Parts assures*

Permanent silence
Continued low operating cost
More years of satisfactory service
Savings that pay for it



**CHANGE TO SILENCE
CHANGE TO SERVEL**



BUILDER:

"As a builder of apartment houses, and having had experience with various kinds of automatic refrigeration, I have become convinced that Servel Electrolux gas refrigerators are best.

Tenants like their silent dependability."
—Mr. S. E. Henderson, 742 S. W. Vista Ave.,
Portland, Ore.

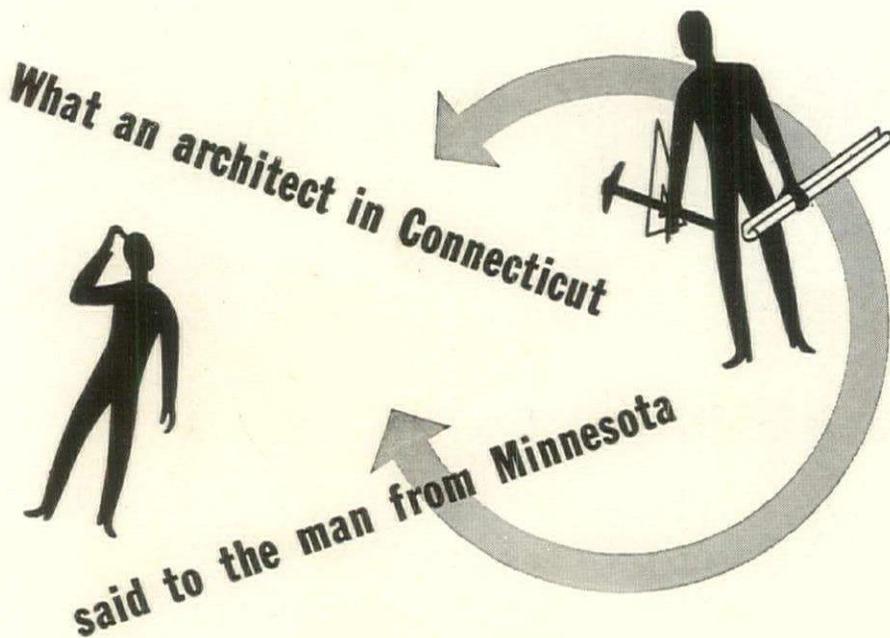
TENANT:

"I've been using Servel Electrolux for four years. I can honestly report that the operating cost is just as little today as it was when I moved in. Another thing I like very much about the gas refrigerator is its silence. You never hear a thing, even though you are right in the room with it." —Mrs. M. A. Chermak, 2459 East 21st Street, Brooklyn, N. Y.



Stays silent...lasts longer

SERVEL
ELECTROLUX
Gas
REFRIGERATOR



"Know what floor finish I've been specifying lately?—Shellac! It's given me grand results from every angle—How about you?"

"Been specifying it for years. There's no finish like good old reliable shellac."

★ ★ ★ ★ ★

When an architect specifies pure shellac, he's not risking his reputation with some new, untried finish. He knows that shellac wears *longer*...shellac wears *better*...and shellac doesn't darken with age or discolor wood.

Once you specify shellac you'll specify it always!

Compare these advantages of shellac with any other floor finish. Compare them for convenience, for cost, for customer appeal!

- ★ Dries dust-free in a few minutes; prevents dirt and grime from marring floors during work, thus eliminating a source of complaint.
- ★ Bonds perfectly and *durably* with wood. The first coat seals and becomes part of the wood itself; subsequent coats provide a tough, attractive finish.
- ★ Gives a dull or glossy finish as desired. Several thin coats, rubbed down, will put a rich velvety finish on your floors. Very fine steel wool on the top coat kills the gloss, gives you a fashionable, dull finish.
- ★ Worn spots can be repatched quickly, easily, and without lap marks.

Points to remember for floors you'll never forget

When you specify shellac, make sure that it will be applied *correctly*. It should be thinned with the best grade of denatured alcohol. Several thin coats will give longer and better wear than several thick coats. Allow plenty of time between coats. Shellac requires less drying time than any other finish, and can be walked on in a couple of hours.

If you want to safeguard your reputation, satisfy the home-owners, give them a finish that's strong, lasting and attractive—specify shellac!

Write to us for a free copy of the latest shellac specifications for architects.

SHELLAC INFORMATION BUREAU
65 Pine Street, New York, N. Y.

Gentlemen:

Please send me a free copy for my files of the latest standard specifications for the reference of architects.

NAME.....

ADDRESS.....

CITY.....STATE.....

SHELLAC INFORMATION BUREAU

65 Pine Street • New York City

PRIORITIES

(Continued from page 58)

these localities would receive preferred preference ratings, the location of these areas is a guarded secret. However, since this was the only fact withheld from the building industry as far as privately financed defense housing priorities are concerned, the air has been considerably cleared. Now, for the first time, manufacturers and builders know where they stand, for Government will see to it that raw materials are made available to manufacturers and that finished materials are made available to builders for the production of at least 300,000 dwelling units.

CRITICAL MATERIALS

Fortnight ago, it was officially announced that priorities assistance would be granted by OPM to privately financed defense housing projects (and to Government projects) *only* for the procurement of such critical materials, products and items of equipment as these:

IRON AND STEEL

Reinforcing steel for concrete and masonry construction; such structural members as bearing plates, joist hangers,* anchors and bolts, tie rods and angle lintels; steel stairs, rails, etc.*; steel insect screen mesh; fire doors and frames*; such steel roofing devices as flashing, gutters, hangers and downspouts, sheets, gravel stops, ventilators, termite shields, wire basket strainers, scuppers and downspout connections; steel lath, corner reinforcing and stucco bases; such hardware items as nails, screws, bolts, nuts, washers, zinc-coated wall ties, pulleys and sash balances, self-releasing fire exit devices, venetian blind fittings, zinc glazing points.

ELECTRICAL

All underground and overhead materials; main entrance service switch and meter pan, meter, circuit-breaker and fuse type distribution panels and fuses; knob and tube wire and fittings, and cable, flexible conduit and armored cable, rigid steel conduit, conduit fittings, outlet boxes and wiring devices; plates, switches and convenience outlets; lighting fixtures.

PLUMBING AND GAS LINES

Plumbing fixtures, fittings and trimmings, cast iron pipe and fittings, galvanized steel pipe, wrought iron pipe and malleable fittings; ferrous metal and brass tubing; traps, cleanouts and connections for fixtures; iron and brass valves; water heaters and storage tanks of galvanized sheet, black steel and coated steel and their brass valves, connections and controls and their copper coils; water softeners;* black steel gas distribution pipe, fittings and valves.

HEATING AND VENT. EQUIPMENT

Boilers, furnaces, breechings, floor furnaces, space heaters, stoves and vents; pumps, fans, blowers and motors; oil storage tanks; expansion tanks for hot water systems; piping, fittings, valves, traps, ducts and connections, hangers and brackets; radiators, convectors and registers and their accessories; firing equipment (oil burners eliminated from eastern seaboard area); control equipment such as dampers, thermostats, relays and controls.

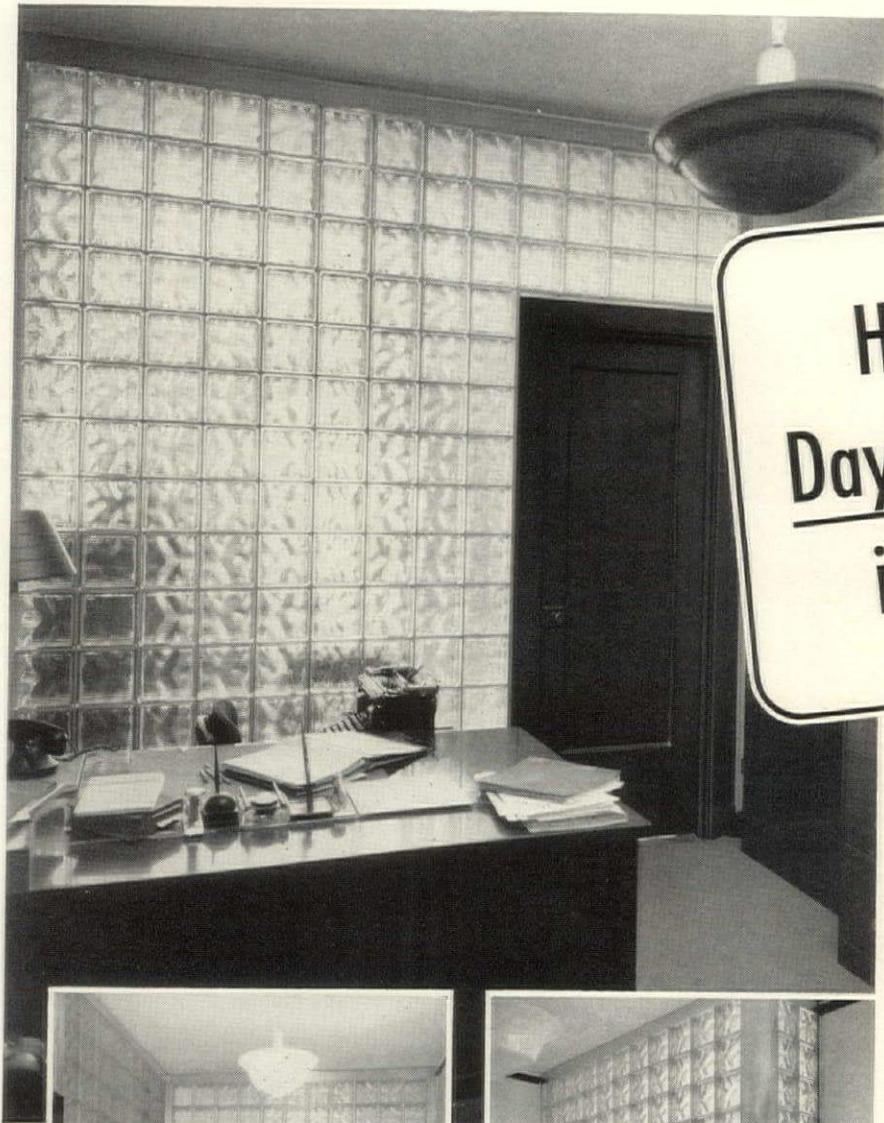
HOUSEHOLD EQUIPMENT

Ranges and refrigerators, incinerator hardware and fittings, refuse receptacles.

LAND DEVELOPMENT ITEMS

Practically all metallic items.

*In multi-family projects only.

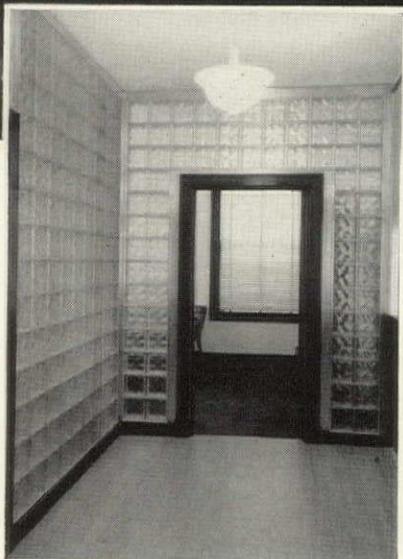


SMART GOOD LOOKS characterize this panel of PC Glass Blocks in one of the Wheeler Kelly Hagny Building suites. But the panel not only pleases the eye. It also brings "borrowed light" into the office to make seeing easier, the room brighter. It is a privacy-preserver of the best type. And it helps to make the room quieter, because of the high insulation value of the blocks.

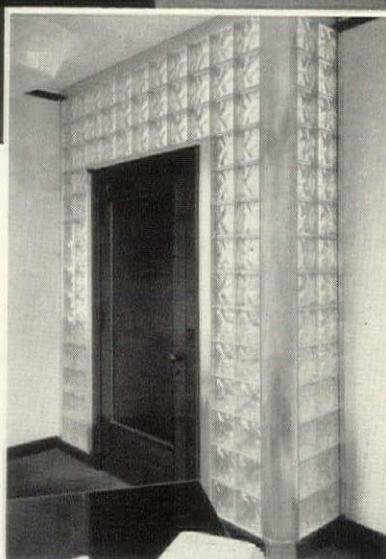
**How to put
Daylight to work
in an office**

PC Glass Blocks bring daylight, good looks and practical benefits to Wheeler Kelly Hagny Building, Wichita, Kansas.

(ARCHITECTS: FORSBLOOM & PARKS)



INVITING IS THE WORD for this entrance, surrounded with bright PC Glass Blocks, and flanked on one side by a large wall panel of blocks which helps to make the corridor better lighted. Such PC Glass Block panels are easy to clean with a damp cloth.



ANY OFFICE IS MORE PLEASANT to work in when it is decorated with PC Glass Blocks like this. And architects everywhere are finding out that these blocks, in their eight attractive patterns and three sizes, offer almost unlimited opportunities for effective office design.

NO extravagant claims are made for PC Glass Blocks. Architects have accepted them on their merits . . . and are using them more extensively in all types of building construction every day. They like these blocks because they perform so many jobs so well. They're handsome in appearance. They transmit daylight. They preserve privacy. And they cut heating, lighting and maintenance costs.

We invite you to send the coupon for our free book which contains many illustrations of actual application of PC Glass Blocks, as well as information on physical properties, construction details, and other specific data.

"PITTSBURGH"
stands for Quality Glass



GLASS BLOCKS

Distributed by

PITTSBURGH PLATE GLASS COMPANY

and by W. P. Fuller & Co. on the Pacific Coast

Pittsburgh Corning Corporation
2194-1 Grant Bldg., Pittsburgh, Pa.

Please send me, without obligation, your free, illustrated booklet about the use of PC Glass Blocks in factories commercial and public buildings.

(Be sure to indicate type of building)

Name.....

Address.....

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



★ **DUPLICATE THIS HALL** in your houses, and then see how its hearty American welcome paves the way to easier sales. What really makes the room is the star-spangled floor of Armstrong's Linoleum. The field is Blue Monobelle No. 04, with stars and stripes of Plain White No. 23. The painted wainscot is red, with upper walls white, and ceiling blue. Write for free book of other useful ideas.



How to make up a woman's mind

... WITH FLOORINGS THAT HELP MAKE A SALE

FIRST impressions go a long way toward selling your houses . . . especially to women. That's why you will find it a smart idea to let Armstrong's Linoleum help you create cheerful, colorful entrance halls like the one illustrated above.

It is *not* expensive to give your houses floors like this. Special inset designs—such as the stars here—can be die-cut for a few dollars extra. Or inexpensive ready-cut designs can be quickly inserted in the floor as a unit.

Your clients welcome nationally-advertised

Armstrong's Linoleum because they know it is an easy-to-clean flooring that never needs expensive refinishing. They recognize it as the top-quality brand; and when they see it in your houses, they know you use superior, dependable materials.

Cash in on Armstrong's valuable consumer-acceptance now. Write for a free, color-illustrated idea book of attractive floor designs and room layouts that you can use in your own houses. Armstrong Cork Company, Floor Division, 1203 State Street, Lancaster, Pa.



ARMSTRONG'S FLOORS LINOLEUM

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

★ **HEADWAY AND HEADACHES**

(Continued from page 8)

governing satisfactory school building planning" (minimum room dimensions, etc.) comes the document's most significant paragraph:

" . . . A number of details have still to be worked out, such as 1) the number of panels to be used in auditorium walls and the best method of attaching them to uprights in order to get a 20 ft. ceiling height; 2) the best method of designing the roof for a room with a 22 ft. span; 3) the finish to be used on the walls of classrooms and corridors. These are details that can easily be solved, but they can only be solved if school authorities, architects, engineers, and manufacturers become interested in trying out this type of building in terms of the particular needs of each locality."

MANUFACTURERS' BITS

Besides supplying the materials from which the Nation's defense plant is being built, at least four big building material manufacturers are doing their bit for national defense by producing other defense items:

► **Sherwin-Williams Company**, the world's largest paint producer, last month completed plans for the construction, management and operation for Government of a 25,000 acre bomb and shell loading project to be known as the Illinois Ordnance Works and to be built on Crab Orchard Lake at Marion, Ill. Exclusive of land but including equipment, the plant will cost anywhere from \$27 million to \$40 million. While paint production and ammunition loading are not sister industries, Sherwin-Williams is amply qualified for the assignment. Its 22 paint, dye, chemical and insecticide factories are essentially chemical plants which operate on a mass production basis. Comments S-W's President Arthur W. Steudel: "Simply to carry out our usual function is not enough . . . Anything we can do beyond that . . . we gladly undertake and accept the great responsibility that goes with it. . . . Naturally, the new Sherwin-Williams Defense Corp. will not interfere in any way with our regular defense business in supplying large quantities of needed paint, enamel and varnish products. . . ."

► **Johns-Manville Corp.**, producer of all things asbestos, in late August signed a contract with the War Department for the construction and operation of a similar shell loading plant near Parsons, Kan. to be known as the Kansas Ordnance Plant. It will cover 25 sq. mi., comprise about 400 buildings, 75 miles of railroad track and 100 miles of road, cost about \$27 million and employ about 8,000. Offered an Army list of firms available for selection. J-M approved Battey & Childs and Consoer

(Continued on page 64)



Architect's Quiz!

How many of these questions can you answer?

1. In what type of house is condensation of moisture most apt to occur?

2. Is it possible for moisture condensation to take place in an uninsulated wall?

3. What scientific method of construction solves the condensation problem?

THESE ARE THE ANSWERS:

1. "Condensation problems are most frequent in houses of modern tight construction, with weather-stripping, storm sash, insulation, and the newer types of heating systems that provide . . . humidification."*
Nat. Bureau of Standards BMS 63

2. "Uninsulated walls accumulate moisture as well as insulated walls."*
Iowa State College Research Bulletin No. 271

3. The Insulite Approved Wall of Protection—because Sealed Graylite Lok-Joint Lath, with an asphalt vapor barrier on the stud side, effectively retards vapor travel; and Bildrite Insulating Sheathing outside permits whatever vapor may escape the vapor barrier to pass on to the outside air.*

*A transcription of these and other experts' opinions on the condensation problem will be sent you on request. Address Insulite, Department AF-101, Minneapolis, Minn.



Sealed Graylite Lok-Joint Lath



Bildrite Sheathing

INSULITE



MINNEAPOLIS
MINNESOTA

Division of Minnesota and Ontario Paper Company

THE ORIGINAL WOOD FIBRE STRUCTURAL INSULATING BOARD

If it's Exterior Trim...



Home designed by A. M. Cantin, Architect

consider these value features of Redwood

Redwood is especially suitable for use as trim with any type of side walls... for these four major reasons...

1 The natural preservatives in Redwood heartwood help resist decay from moisture.

2 Redwood has low volumetric shrinkage, hence joints stay put.

3 Redwood ranks high in paint holding ability; saves 20% to 40% in maintenance.

4 Certified Dry Grades of Redwood are seasoned to the proper moisture content for your locality.

☆ If you can't obtain Redwood easily please write, we will tell you how to get it. Send for architectural data.

California Redwood Association

SAN FRANCISCO

Also offices in Los Angeles and New York

HEADWAY AND HEADACHES

(Continued from page 62)

Townsend & Quinlan of Chicago as the plant's architect-engineers and Peter Kiewit Sons' Co., Geo. W. Condon Co. (both of Omaha) and Paschen Contractors Inc. of Chicago as the construction contractors. Admitting his company's unfamiliarity with shell loading, President Lewis H. Brown in a recent letter to J-M stockholders noted that "the relatively small fixed fee to be received for our services would mean little, after tax deduction, compared with the grave responsibility. Patriotic duty was the only inducement." ▶ General Electric Co. has just completed a new 400 x 500 ft. windowless factory for the production of airplane turbo-superchargers in Everett, Mass. for the Defense Plant Corp., an RFC subsidiary. Decision to replace the usual factory windows with elaborate air conditioning equipment was based, for the most part, on the fact that the manufacturing process involves numerous accurate machining processes on aluminum and magnesium alloys, which require close temperature control throughout the year for successful results.

▶ Masonite Corp., makers of wood fiber boards and insulation products, month ago turned on its new \$800,000 gas-fired steam turbine electric power station at its huge Laurel, Miss. plant. Capable of generating 14,000 kw. of electric power, the plant will supply Masonite's needs, have 3,500 kw. left over for outside customers. And, the 10,000 kw. which Masonite used to draw from the Mississippi Power Company will now be made available to other defense industries which have been pressed for power in this Tennessee Valley Authority area.

STILL MORE PLANTS

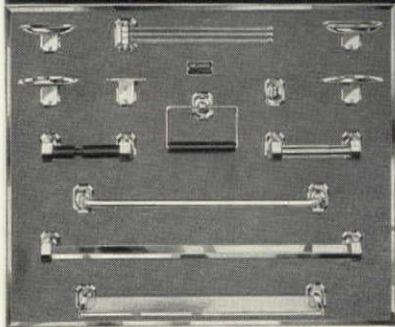
Building contract of the month went to John McShain, Inc. of Philadelphia and Doyle & Russell and Wise Contracting Co. of Richmond for the construction of the War Department's controversial office building originally proposed for erection at the gates of the Arlington (Va.) National Cemetery across the Potomac from Washington, D. C. (ARCH. FORUM, Sept. 1941, p. 2). On orders from the President, the Army shifted the proposed project to a site south of the Arlington Experimental Farm where a Quartermaster Depot is now abuilding, cut its original size in half to provide accommodations for 20,000 office workers, sent the plans back to Architect Edwin Bergstrom (past A.I.A. president now affiliated with the Army's Quartermaster Corps) for revision. To save time and to permit the beginning of construction operations prior to the completion of working drawings, the Army let the office building contracts on a cost plus fixed fee basis.

(Continued on page 66)

Only HALL-MACK

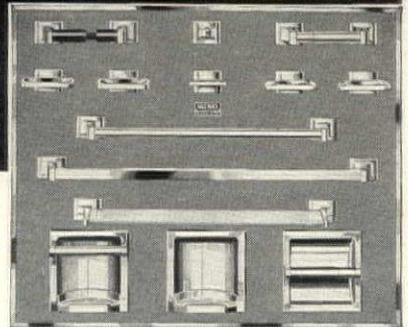
OFFERS YOU *eight* COMPLETE LINES

ONE DEPENDABLE BRAND



Above—panel showing economical, chromium-plated **Metropolitan** accessories.

Below—a dealers' display panel showing lighted cabinet and sets from four different lines from which to make your selection.



Above—modernly designed **Coronado** accessories in gleaming chromium finish.

Below—beautifully lighted medicine cabinet and **Aristocrome** accessories for installation in the very best homes.

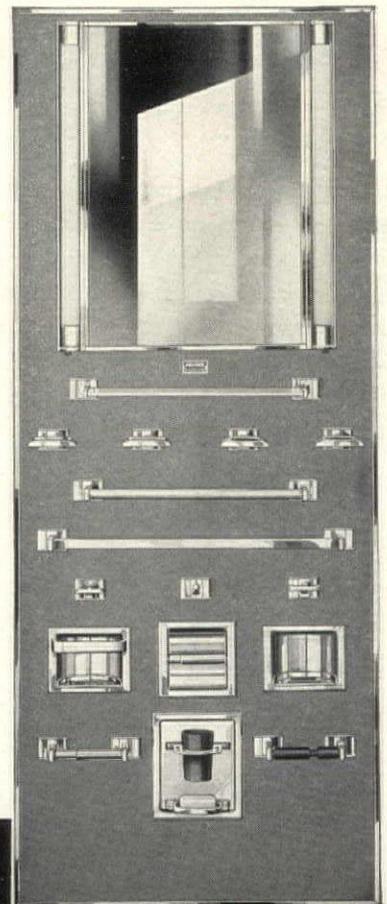
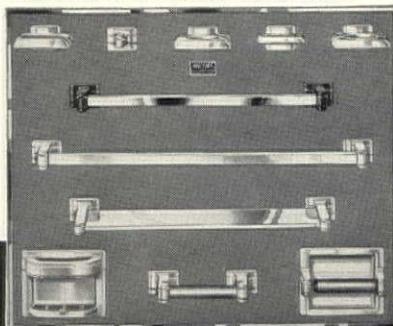
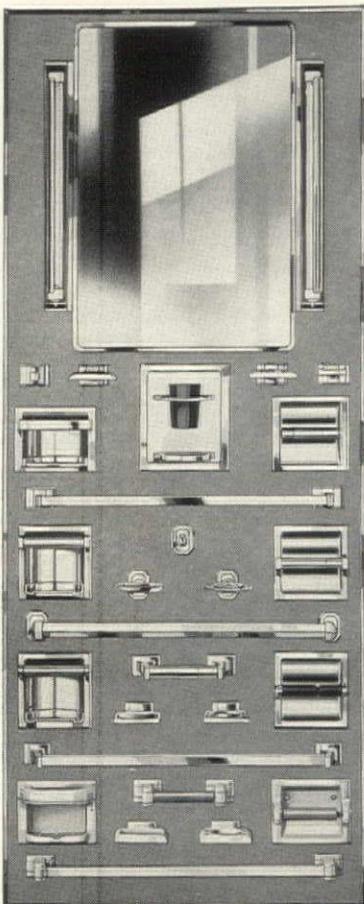
HALL-MACK offers you America's *most complete selection* of bathroom accessories and medicine cabinets. *FIVE* complete lines of chromium plated fixtures from which to choose: **Aristocrome** solid forged brass, in two distinctive styles; plus **Colorcrome** solid forged brass; **Coronado** medium-priced chrome fixtures and **Metropolitan** low-cost fixtures.

In addition, there are *THREE* complete lines of vitreous china fixtures: the screw-on and cement-in lines of **Chinavogue** and the full line of **Standard China** which combine to offer white, black and matching colors in several different patterns. Both chrome and china fixtures available for every type of screw, toggle bolt or cement installation.

The same wide choice is available in Hall-Mack Seamless Medicine Cabinets: a type to suit every requirement from the New Fluorescent Models and the Hollywood Vanity Cabinet down to lowest-cost competitive designs. So, whether you are planning a Movie Star's Palace or a Defense Housing Project, you can rely on the complete breadth and scope of the Hall-Mack line to serve your every need in every price classification.

Equally complete service, too, with four full warehouse stocks located to give quick delivery to every section of the U.S.A.

Below—**ChinaVogue** fixtures of vitreous china. Attractively styled, yet very low in price.



HALLENSCHEID & McDONALD

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 CHICAGO • SAN FRANCISCO • PHILADELPHIA



MINWAX CAULKING COMPOUND USED IN ROCKEFELLER CENTER, NEW YORK CITY

(A) RCA Building (B) RKO Building (C) Music Hall (D) Associated Press Building (E) International Building (F) Italian Building (G) British Building (H) French Building (J) Time & Life Building (K) American Air Lines Building (L) Center Theatre (M) U. S. Rubber Building.

Caulking Compound gives 10 Years' Service without renewal or replacement cost.

Minwax Caulking Compounds have been used on all of the buildings of Rockefeller Center. Selected on the basis of final economy rather than first cost — the initial installations have now given 10 years' service without renewal or replacement cost.

For true economy — for trouble-free, expense-free service—specify Minwax Caulking Compounds. See Sweet's, Section 5, Catalog No. 21. Minwax Co., Inc., 11 West 42nd Street, New York.

FREE Send for the Pittsburgh Testing Laboratory's Report on Mi-wax Caulking Compounds.

TRADE MINWAX MARK

Waterproofings Wood Finishes
Dampproofings Waxes
Caulkings Protective Coatings

COMPLETE CATALOGUES IN SWEET'S

HEADWAY AND HEADACHES

(Continued from page 64)

Other whopping (\$5 million plus) contracts let by Government since the previous listing (ARCH. FORUM, Sept. 1941, p. 210) went to:

► Webster Engineer Corp. of New York City for construction of the \$34.2 million Volunteer Ordnance Works (TNT) at Chattanooga, Tenn. to be operated by Hercules Powder Co.

► M. J. Boyle & Co. of Chicago and S. A. Healey of White Plains, N. Y. for construction of the \$23.6 million Illinois Ordnance Works (shell and bomb loading) to be operated by Sherwin-Williams Defense Corp. (see p. 62, col. 3). Architect-engineers are Charles W. Cole & Sons of South Bend, Ind.

► Foley Bros. Inc. of St. Paul and Walbridge-Aldinger Co. of Detroit for construction of the \$17.7 million Twin Cities Ordnance Plant at St. Paul (small arms ammunition).

► Bechtel-McCone-Parsons Corp. of Los Angeles for construction of the \$16.1 million Missouri Ordnance Works (Louisiana, Mo.) to be subsequently operated as an anhydrous ammonia plant by the Hercules Powder Co.

► McDonald & Kahn and J. F. Shea of San Francisco for construction of an Armored Division camp on a 90,000 acre site near Santa Maria-Lompoc, Calif. from plans prepared by Architect-Engineers Leeds, Hill, Barnard & Jewett of Los Angeles. Lump sum: \$17.4 million.

► A. Farnell Blair of Decatur, Ga. for another Armored Division camp on 71,600 acres near Fort Smith, Ark. to be built from plans and specifications by Architect-engineers Black & Veatch of Kansas City, Mo. Lump sum: \$15.5 million.

► G. L. Tarlton, Contractor, Inc. and MacDonald Construction Co. of St. Louis for the building of a \$12.5 million replacement center for the Signal Corps on a 66,500 acre site at Neosho, Mo.

► J. A. Jones Construction Co. of Charlotte, N. C. and MacDougald Construction Co. and Smith & Pew Construction Co. of Atlanta for the building of a \$12.6 million camp for a motorized triangular division on 44,000 acres near Augusta, Ga. (This and the contract mentioned directly above were let on a cost plus fixed fee basis because the Army has not yet had the camps designed. Plans for the two camps contracted for on a lump-sum basis have long since been prepared.)

► Griffin Construction Co. and Mion Construction Co. of Atlanta for construction of 23 industrial buildings, 38 military buildings and related utilities at a cost of \$10.6 million for the Georgia Air Depot at Wellston.

► Robert E. McKee of El Paso, Tex.

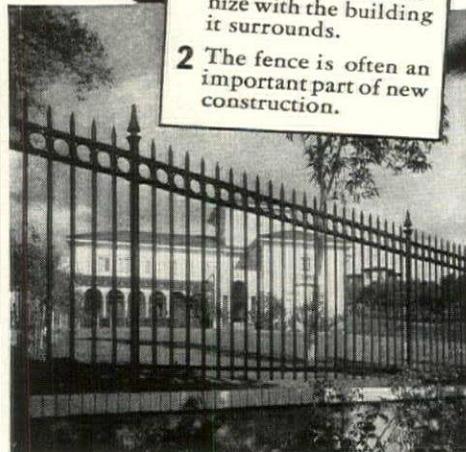
(Continued on page 68)

SHOULD ARCHITECTS SPECIFY FENCE?

Yes-Because

1 Fence should harmonize with the building it surrounds.

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



WHY DO MANY ARCHITECTS Specify ANCHOR-WELD IRON FENCE?

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

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

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

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

NATION-WIDE SALES AND ERECTING SERVICE

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

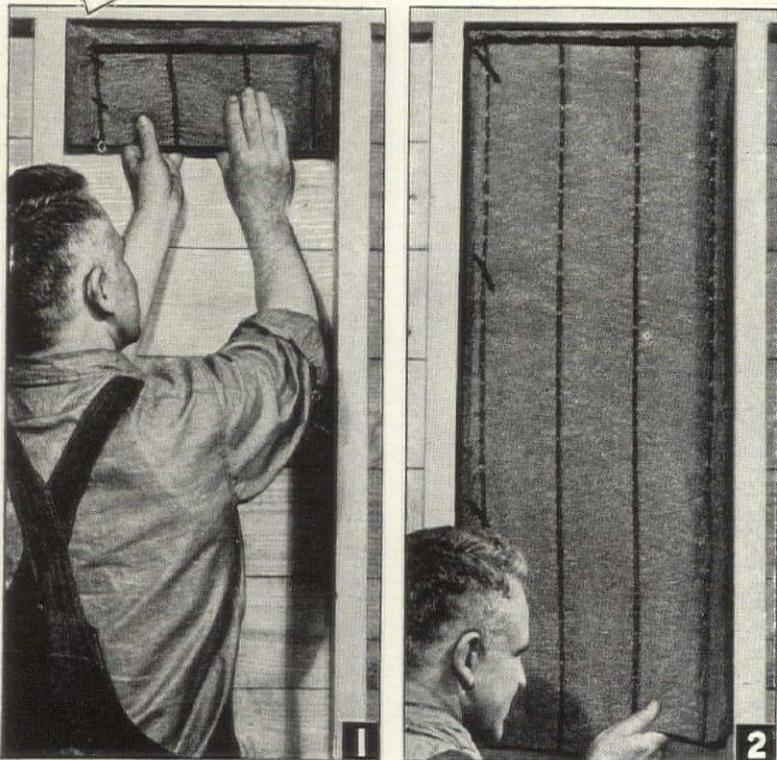
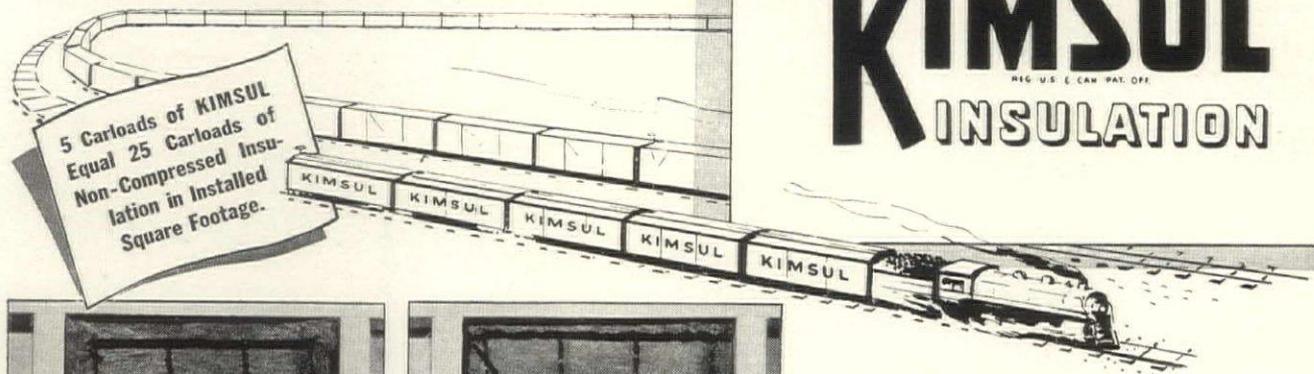
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City..... State.....

COOPERATE WITH DEFENSE PROGRAM

Recommend

KIMSUL
REG. U.S. & CAN. PAT. OFF.
INSULATION

5 Carloads of KIMSUL
Equal 25 Carloads of
Non-Compressed Insu-
lation in Installed
Square Footage.



KIMSUL IS COMPRESSED AT THE FACTORY — EXPANDED ON THE JOB

KIMSUL is a soft, flexible insulating blanket composed of processed wood fibers. KIMSUL comes in wanted widths and thicknesses...is compressed to about 1/5th its installed square footage. Thus KIMSUL is extremely easy to ship, store, handle and install. Illustration No. 1 shows compressed blanket attached to top plate of side wall. Illustration No. 2 shows blanket being expanded to correct density and length.



KIMSUL Does Not "Hog" Space
Compressed form results in fewer cartons. KIMSUL does not get "in the way" on the job. Illustration shows 1,375 square feet of KIMSUL on the job and not in the way.



KIMSUL is Easy to Handle
Carton containing 125 sq. ft. of KIMSUL weighs only 19 lbs. Remarkably easy to carry...adds but negligible weight to structural load of the building.



KIMSUL Saves Man-Hours
KIMSUL goes up FAST! It's usually only a one-man job to install KIMSUL. Workmen like to work with clean, odorless, non-disintegrating KIMSUL.

KIMSUL* gives top insulation efficiency — KIMSUL releases freight cars for urgent defense uses!

• By using KIMSUL Insulation in Defense construction, the U. S. Government not only obtains top-rank insulation efficiency, but at the same time releases freight cars for other important transporting jobs. KIMSUL Insulation is delivered in compressed blankets. Five carloads of KIMSUL equal 25 carloads of non-compressed insulation in installed square footage!

KIMSUL is one of the most effective heat and cold stoppers ever developed. It is fire-resistant, moisture-resistant and *lasting*. But just as important in this period of emergency, KIMSUL's exclusive compressed form speeds shipments, simplifies installation and lowers over-all costs. Specify KIMSUL and you assist the U. S. Defense Program by releasing freight cars for other urgent needs.

Learn more about KIMSUL now. Mail coupon below for free illustrated KIMSUL book containing complete information.

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Please send a representative
 Please send free book, "Guide to Efficient Insulation"

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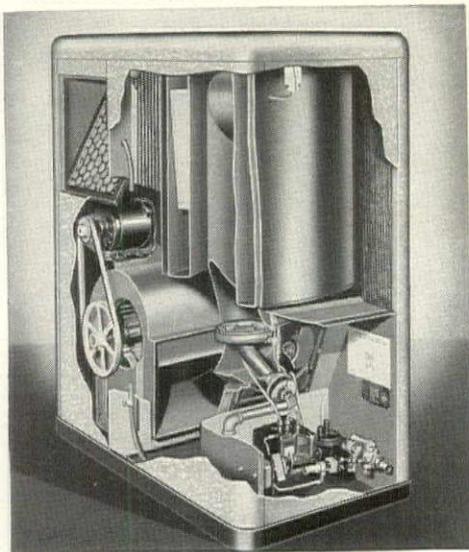
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RYBOLT

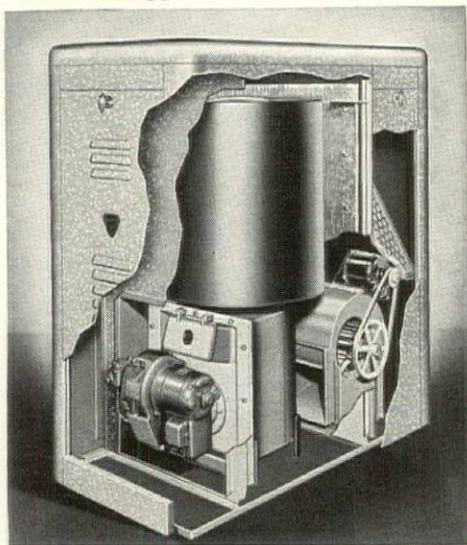
Two New RYBOLT Automatic Heating Units for DEFENSE HOUSING

• To meet the space limits of the modern small house, RYBOLT has designed two new winter air conditioning units . . . one gas-fired and one oil-fired. Because of their unusual compactness, these units are specially adapted for National Defense housing. They are complete with the most advanced features of modern automatic heating. Yet they are well within the price range of the defense housing market.



Space-Saver Gas-Fired Unit

This new RYBOLT Gas-Fired Unit is compact, completely automatic and fully dependable. Handsome hammerloid enamel finish cabinet. Shipped completely assembled.



Compact Oil-Fired Unit

This compact RYBOLT Oil-Fired Winter Air Conditioner is sized to fit into minimum space with no sacrifice of efficiency. Completely automatic, quiet in operation. Attractive hammerloid enamel finish cabinet.

Write for folders.



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

HEADWAY AND HEADACHES

(Continued from page 66)

for \$7.5 million of additional barracks, mess halls and auxiliary buildings at the Aviation Mechanics' School at Wichita Falls, Tex. (McKee's total contract is now \$12.4 million).

► Brann & Stuart & Co. of Philadelphia for construction of six warehouses and six accessory buildings at an estimated cost of \$5.0 million at the Army's General Storage Depot at Marietta, Pa.

► Duffy Construction Corp. and Carlton Co. of New York City for construction of a \$5.0 million similar depot at Voorheesville, N. Y.

In the offing are additional construction contracts which will follow these important last month Government project announcements:

► The President signed a \$275 million flood control authorization bill.

► Covering architect, engineer and construction services (which will probably be subcontracted) an \$84.2 million contract was let to E. I. duPont de Nemours & Co. for the construction of the Oklahoma Ordnance Works at Choteau, Okla.

► The Defense Plant Corp. (RFC subsidiary) will provide \$63.2 million for the construction of magnesium plants to be built for Basic Magnesium, Inc. near Gabbs, Mead and Las Vegas, Nev.

► Dow Chemical will soon let contracts for a \$52 million magnesium plant to be built and operated for the Government somewhere along the Gulf of Mexico.

► General Electric Co. was asked to expand its Erie, Pa. facilities for the production of steam turbines and gears to the tune of \$24.5 million, and Westinghouse Electric & Manufacturing Co. was asked to spend \$220 million for the same purpose at Lester, Pa. The Maritime Commission made the requests; Defense Plant Corp. will supply the funds.

► An architectural-engineering contract has been let for layout and design of a \$22.8 million camp at Morganfield, Ky. to Warren & Roland, Ray W. Chanberry, Inc., Colley & Hartstern (all of Louisville) and Associated Architects and Engineers of Lexington.

► Diamond Alkali Corp. of New York City will build (via sub-contractor) a projected \$16.0 million magnesium plant at Painesville, Ohio.

► Commercial Solvents Corp. of New York will soon let contracts for a \$9.3 million anhydrous ammonia plant at the Dixie Ordnance Works at Sterlington, La.

► OPM recommended to the War Department construction of a plant at Troutdale, Ore., for the annual production of 90 million pounds of aluminum. Aluminum Co. of America will probably operate it, once it is approved and built.



WE'RE WORKING FOR UNCLE SAM, TOO...

HELPING PROTECT DEFENSE PROJECTS AGAINST THE HAZARD OF LIGHTNING



WEST DODD is manufacturing and installing lightning protection and static control equipment on ammunition loading lines, igloos and standard magazines, ordnance plants and powder plants. With vital defense projects like these, no unnecessary risks are taken and lightning is a hazard in itself, besides being one of the leading fire causes. Insurance records prove it!

The same reliable West Dodd protection against lightning is available to you for residences, factories and public buildings at relatively modest cost.

West Dodd is the oldest and largest manufacturer of such equipment. Its materials and methods of installation are approved by Underwriters' Laboratories, the American Institute of Electrical Engineers and other recognized authorities. On defense projects West Dodd meets government specifications.

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See Sweets' Catalog File or Write:

WEST DODD LIGHTNING CONDUCTOR CORP.

A RELIABLE PROTECTION AGAINST A LEADING CAUSE OF FIRE



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FREE estimating and engineering service to architects on installations when inquiry is accompanied by blue-prints of all elevations and roof detail showing location of soil pipes, metal ventilators, etc. Write for literature



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FIGURES PROMINENTLY IN

Defense Plans

Architects and Engineers everywhere, in the defense program, are specifying "Steelcrete" Expanded Metal for many uses in all types of

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for
various types of Partitions, Enclosures, Guards, Ship Bulkheads, etc.

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92-PAGE BOOK—Send for your copy of this interesting book on "Steelcrete" Expanded Metal. It has numerous photographs, drawings and specifications. A helpful data book for use when planning defense projects.



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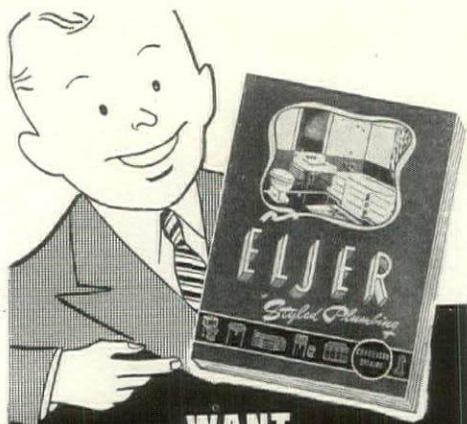
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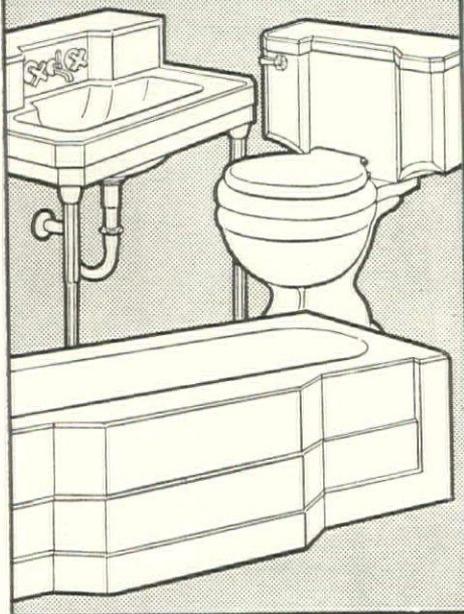
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MONTH IN BUILDING

(Continued from page 10)

materials. Seeing the parallel and looking for a possible forecast of future trends in the U.S., the New York City Building Trades Employers Assn. has reviewed the 1937-38 developments on the Nazi building front, has broadcast them to its constituents via its monthly mouthpiece, *News and Opinion*. Among other things, the B.T.E.A. found that:

▶“There was first voluntary action under governmental pressure on architects, builders and manufacturers to conserve metal. This was followed by stricter governmental control and finally the entire building industry was encircled by the most stringent regulations, under which even the wasting of a 10d nail became a crime against the state.”

▶Public building was favored over private building; small houses over large ones.

▶Steel frame construction was replaced by the use of reinforced concrete and concrete blocks.

▶The recommended use of wood as a substitute was limited by the necessity for importing a large portion of it. Thus, composition wallboards of fiber and cement were developed.

▶The government ordered the redesign of heating and plumbing systems to shorten pipe connections. Radiators could be no more than 6 in. from the risers.

▶Houses were limited to one bathroom each and porch lights, two-car garages, steel sash and iron railings were taboo.

▶To permit thinner lead pipe walls, the metal was alloyed with antimony.

▶Dimensions of doors and windows were ordered smaller and standardized at a reported cost saving of 40 per cent. Bucks, sills and window frames were eventually made of cement.

▶Malt cement was reinforced with bricks, bamboo and other substitute materials.

▶Peat replaced cork, jute and asbestos for the heat insulation of pipes, to which it was held, first, by iron wire and, later, by jute netting.

▶Glass and porcelain pipes and tubes were used to conserve metal. And, comments *News and Opinion*, “A cheap plastic was developed and used for heat and water piping, much to the embarrassment of the pipe trades who did not know how to erect it. Considerable difficulty was had in steam work because the plastic pipes did not hold up well at first against constant heat. All jurisdictional disputes, of course, were absolutely forbidden, and so this thoroughly American difficulty did not add to the troubles of German building contractors. . . .

▶“German architects and builders, in spite of such unusual restriction on their work, used great ingenuity in adapting
(Continued on page 72)

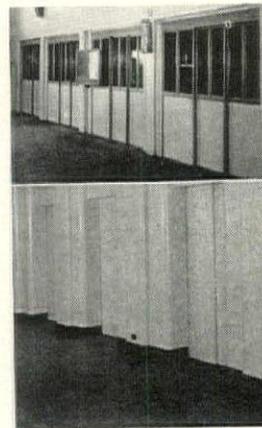
GENUINE — ORIGINAL

STRUCTURAL BENDS

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NOW! In 8 ft. and 12 ft. LENGTHS

Any height . . . any shape . . . any size area can economically be treated with Genuine Structural Bends . . . Now in 8 foot and 12 foot lengths! 18 basic shapes carried in stock. Genuine Structural Bends enable you to do smooth modern construction of most any type at lowest cost. With the new 12 foot lengths, additional height, if required, can be obtained with a minimum of construction. Genuine Structural Bends are practical . . . flexible . . . easy to cut . . . construct . . . finish and install.



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"Thank You, Mr. Architect, for Specifying Beautiful BRUCE STREAMLINE FLOORING!"



FINISHED AT THE BRUCE FACTORY... READY FOR USE THE INSTANT IT'S LAID!

Clients praise Bruce Streamline Flooring every time! For Streamline's beauty is more than surface-deep! Every square inch has been uniformly finished and waxed at the Bruce Plant on special machines. The *finish penetrates the pores of the wood*—resists scratching, chipping, peeling.

And Bruce Streamline Flooring enables clients to get into their new home much sooner, too! Since it requires no additional sanding, finishing or waxing, it's *ready for use the instant it's laid!* Ideal for remodeling jobs. Laid like regular strip flooring. Available in Oak, Maple, Beech. Three sizes: 25/32" x 3 1/4", 1/2" x 2 1/2", 3/8" x 2". Costs clients no more than ordinary hardwood flooring finished on the job! Nationally advertised. Mail coupon for literature and Free "Scratch-Test" panel today!

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MAKE THIS "SCRATCH TEST"!

Show your clients! Half of panel is finished new "Bruce-Way"—other half, ordinary surface way. Scrape a coin across both surfaces. See how ordinary finish chips away. Bruce finish is unharmed!



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Gentlemen: Please send FREE "Scratch-Test" panel and full details about Bruce Streamline Flooring.

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to
increase the beauty
and
prolong the life
of wood



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Cabot-Stained house. Architect, Albert Harkness, Providence, R. I.

● The natural beauty of wood shingles is revealed and emphasized through the soft, transparent colors of Cabot's Creosote Shingle Stains. The life of the wood is doubled by the vehicle of pure creosote — best wood preservative known.

FREE — Color Card and Booklet. Write today for color card and free booklet, *Stained Houses*, containing full information and showing pictures of many prize-winning Cabot-Stained houses. Samuel Cabot, Inc., 1275 Oliver Bldg., Boston, Mass.

Cabot's Shingle Stains

Creosote

Heavy-Bodied

MONTH IN BUILDING

(Continued from page 70)

themselves to it to produce apparently substantial structures of severe but not ugly design. More extraordinary is the fact that with all this bureaucratic control the Reich built more individual dwelling units in 1936 and 1937 than we did here in the U.S., and in 1938 we exceeded by not a great margin. . . ."

PUBLIC WORKS RESERVE

Progress toward the formation of a Post-War Pattern for the building industry was announced month ago by the National Resources Planning Board under whose guidance local governments are setting up a reserve of public works for post-war execution (ARCH. FORUM, Aug. 1941, p. 4). Working closely with the Federal Works Agency, NRPB points with pride to 52 cities in 19 States which have already begun long range planning of their public improvements as part of the Public Works Reserve program.

Procedures for planning, programming and budgeting public works needs and expenditures are based upon successful demonstration projects in seven localities coast to coast and are highlighted in a recent NRPB report. Excerpts: "A list of the improvements needed in the community during the next five or six years, arranged in some order of preference is compiled. The financial resources and commitments of the municipality are analyzed to determine the funds which will probably be available or which can be provided safely for the construction of public improvements during the period indicated. Those projects which are tentatively scheduled for construction are then scheduled over these years, in the order of their relative desirability, and in direct relation to the funds indicated to be available for the purpose. The first year of the schedule is then recommended as a capital budget for the ensuing year and is given legislative consideration, the balance of the schedule constituting the probable future requirements.

"At the end of the first year the program is reviewed. New projects which appear to be needed are added to the lists. Projects no longer appearing to be justified are eliminated; others may be shifted in position in the schedule in accordance with changed needs, or for other reasons. An additional year is added to replace the year just completed, and the revised list of projects is again scheduled over the full period of the program. The schedule for the first year of the newly revised program is then recommended as the capital budget for the coming year.

"Every year thereafter the operation is repeated. Thus, a carefully conceived long-term program is always available and in readiness for use, but with only one year actually committed at any time."

(Continued on page 82)

THE Sash Balance THAT MEETS EVERY NEED IN DEFENSE HOUSING

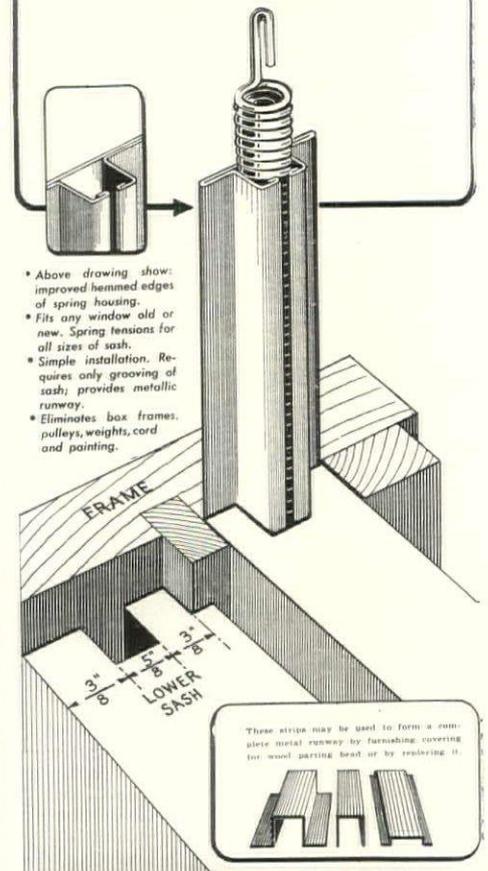
Costs less per window
Combines balance and weather-
stripping

Provides faster installation

Assures easier operation

- The Master No-Draft Sash Balance is the answer to satisfactory, low cost, double-hung window installation because it permits economical, simplified frames with properly weatherstripped sash runs and perfectly balanced sash. Master No-Draft Sash Balance is easily adjusted, fits all size sash, has performance tested spring and requires no wood parting bead in the frame. Write today for complete details or see Sweet's Catalog.

We anticipate no delay in filling orders due to material shortage at the present time.



- Above drawing shows improved hemmed edges of spring housing.
- Fits any window old or new. Spring tensions for all sizes of sash.
- Simple installation. Requires only grooving of sash; provides metallic runway.
- Eliminates box frames, pulleys, weights, cord and painting.

These strips may be used to form a non-slip metal runway by fastening covering for wood parting bead or by replacing it.

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Gentlemen: Please send me details and information on the Master No-Draft Sash Balance.

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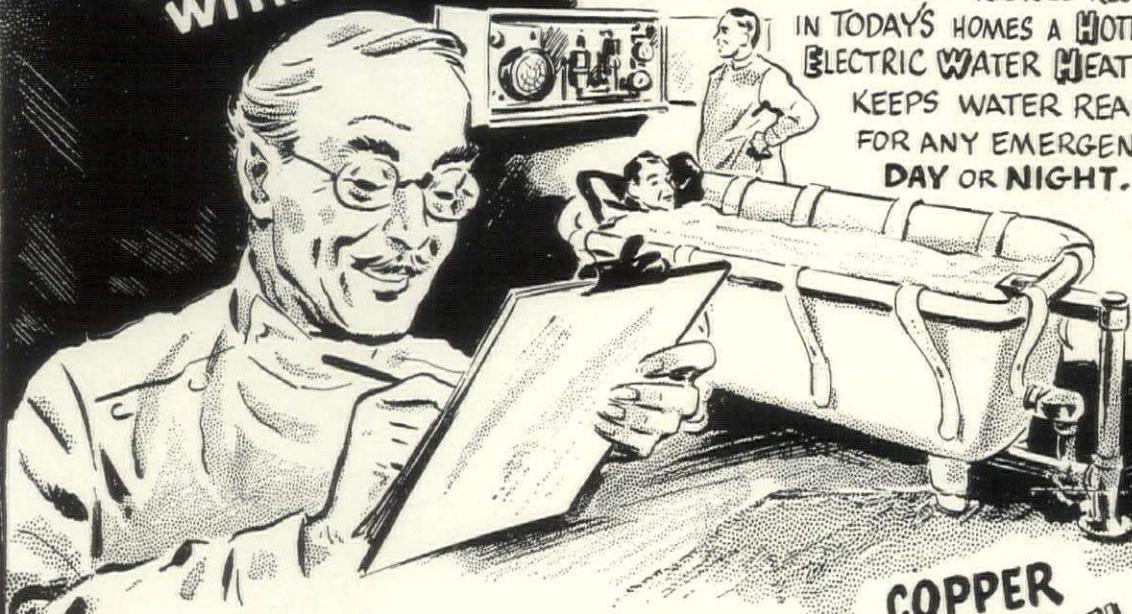
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WOULD YOU BELIEVE IT?

**MIRACLES
WITH HOT WATER**

EVERY DAY IN MODERN HOSPITALS THERAPEUTIC TREATMENT OF CERTAIN AILMENTS EFFECTS REMARKABLE RESULTS.

IN TODAY'S HOMES A **HOTPOINT ELECTRIC WATER HEATER** KEEPS WATER READY FOR ANY EMERGENCY DAY OR NIGHT.

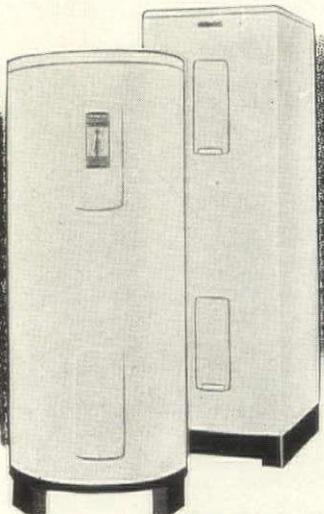
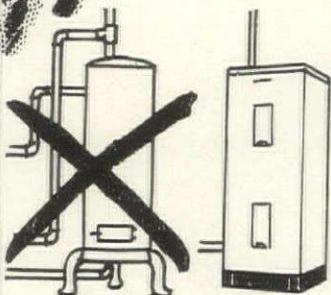


**COPPER
99⁵¹/₁₀₀%
PURE**

THE HOTPOINT ELECTRIC WATER HEATER, BECAUSE IT CAN BE SAFELY PLACED NEAREST THE POINT OF FREQUENT USE, REDUCES HEAT LOSSES AND PIPING!

IS USED IN MAKING TUBING FROM WHICH THE **CALROD IMMERSION UNIT** IS MADE. ONLY THE FINEST MATERIALS ARE USED IN **HOTPOINT ELECTRIC WATER HEATERS** WHICH ACCOUNTS FOR THE **FACT THAT LAST YEAR HOTPOINT OUTSOLD ALL OTHER MAKES!**

THERE are good reasons why Hotpoint leads the parade in Electric Water Heater sales. These Hotpoint advantages for you and your clients show why: **1.** Convenient installation in closet, kitchen or basement. **2.** Safe and flameless. **3.** Saves installation time and money because it requires no flues. **4.** Accurately controlled heat lengthens life of plumbing fixtures and pipes. **5.** Completely automatic, dependable and safe. Send the coupon NOW for full information. Edison General Electric Appliance Co., Inc., 5651 W. Taylor St., Chicago.



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Hotpoint WATER HEATERS

**ELECTRIC RANGES • REFRIGERATORS • WASHERS AND IRONERS • CLOTHES DRYERS
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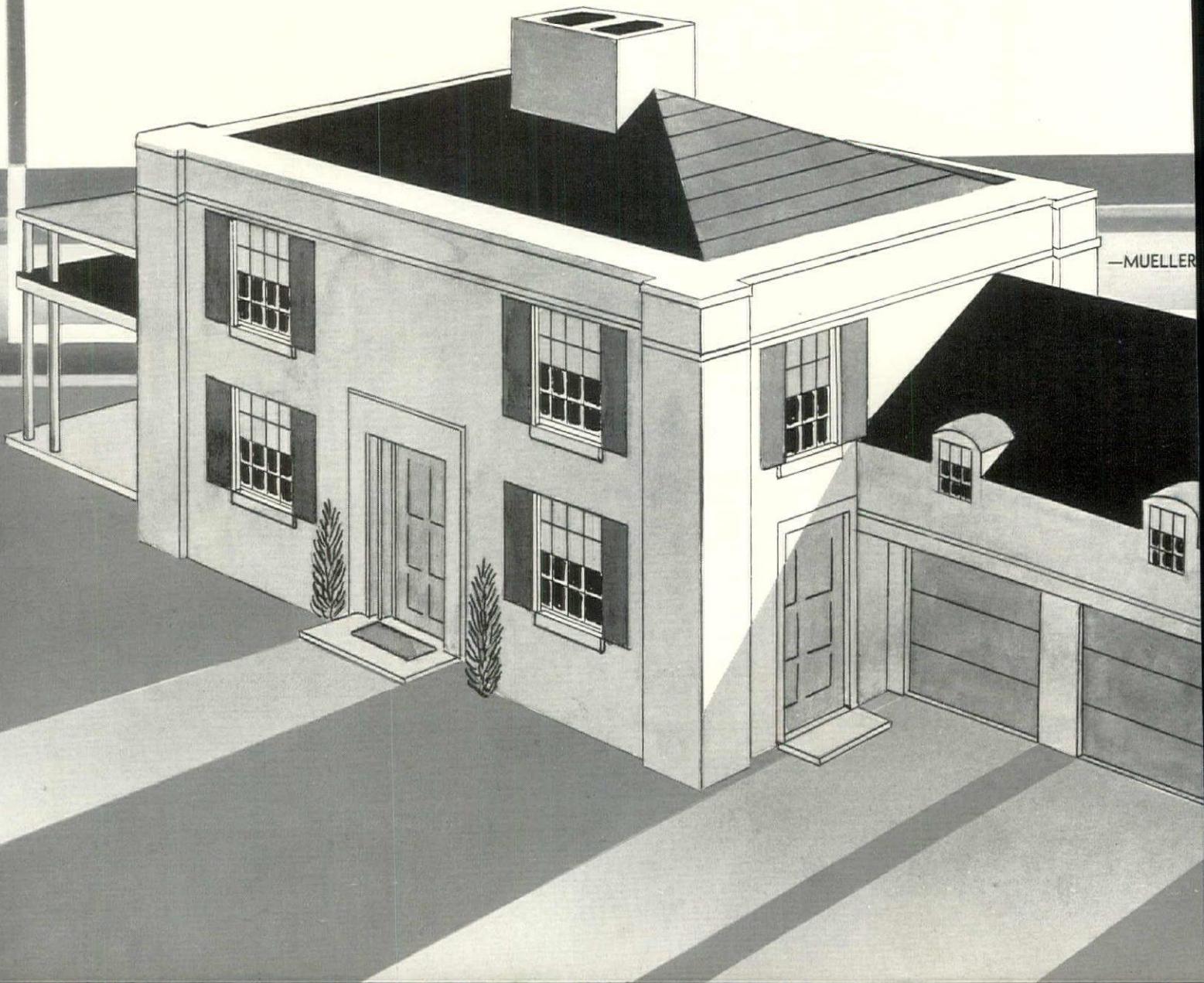
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Please send me full information on the complete line of Hotpoint Automatic Electric Water Heaters.

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IN THE
Final analysis
IT'S VITALLY IMPORTANT TO



● Copper has long been recognized as the most durable of metals for piping purposes. There are authentic cases on record where it has lasted for hundreds of years and, with the exception of a slight tarnish, just as serviceable as when first installed.

Although Copper is not a cure-all for all water conditions — and there are certain sections in the country where its use is not recommended — it does fill the requirements for an all-purpose piping in the great majority of cases, and in most instances is a far superior piping to install.

An efficient — and lastingly efficient plumbing or heating piping system is one of the most vitally important factors in any home, or in any building where a conducting system is required. It is the actual nerve center upon which the very livability of the dwelling depends — and this becomes more and more apparent after some years of service.

● You can confidently install STREAMLINE Copper Pipe, connected with modern STREAMLINE Solder Fittings, and know that you will have a permanently reliable conducting system that assures efficient service from up-to-the-minute fixtures and radiating units, year in and year out.

STREAMLINE has another angle of dependability too — and that is in the matter of concealed piping, hidden behind walls or between floors and ceilings. One leak in these inaccessible places may cause many dollars worth of damage to property and furnishings, and involve trouble and inconvenience for tenant and owner. STREAMLINE eliminates this risk and worry.

Even the first cost of STREAMLINE Copper Pipe is but slightly higher than one of rustable materials, and in the long run it costs much less. Its first cost is the last one.

MUELLER BRASS CO.—PORT HURON MICH.—STREAMLINE—HARD—GOVT—TYPE M—

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TRADE MARK REG. U. S. PAT. OFFICE

COPPER PIPE AND SOLDER FITTINGS FOR THE PLUMBING AND HEATING SYSTEM

PORT HURON MICH.—STREAMLINE—HARD—GOVT—TYPE M—MUELLER BRASS CO.

HARD—GOVT—TYPE M

What Is the Final Analysis?

Will the piping system continue to give peak service year after year for the life of the building?

Will the modern fixtures in the bathroom, kitchen and laundry be adequately supplied with a full flow of water?

Will the radiators maintain their maximum efficiency in heating every room in the house?

Will it be free from leaks, particularly in concealed places behind the walls and between floors and ceilings?

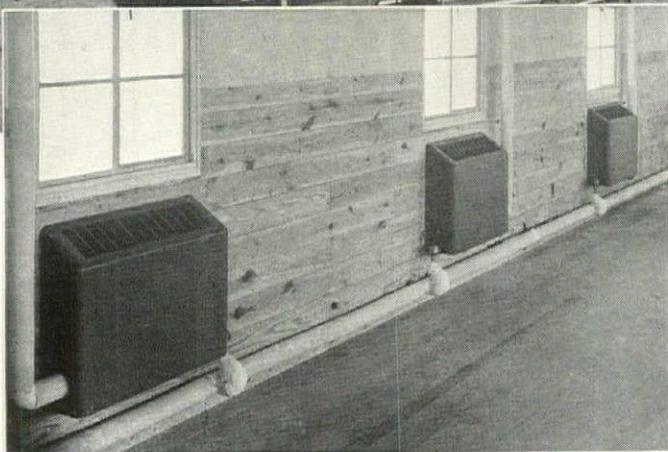
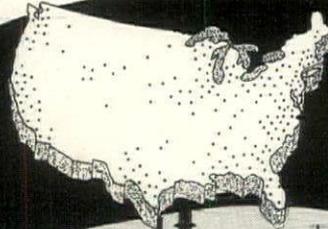
Will it be forever free from internal clogging due to rust?

Will it actually add to the resale value of the property?

STREAMLINE
PIPE AND FITTINGS DIVISION
MUELLER BRASS CO.
PORT HURON, MICHIGAN

If the answer to any of these questions is NO — then you are not installing the piping system that will give you the utmost for the money expended, but if you wish to answer all these questions with a positive YES — then your choice will be genuine STREAMLINE Copper Pipe and STREAMLINE Fittings, and you will specify and accept nothing else.

**There's a TRANE National
Defense job near you**



PPOINT your finger to a place on the map of the United States. It won't be very far from an army camp or a navy base where Trane Convectors, Unit Heaters and Steam Heating Specialties are on the job to provide the last word in modern comfort for the men who are guarding America.

At Corpus Christi, Sand Point, Quonset Point, Camp Dix, Fort Lewis, Lakehurst, Boston Navy Yard, Parris Island, Camp Shelby, at Camp Joseph T. Robinson—these are but a few of the names on the long roster of Trane heated military and naval centers where the prompt delivery of vital Trane equipment helped to meet or better construction deadlines.

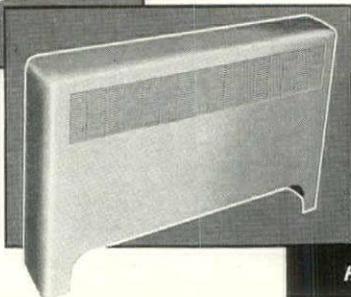
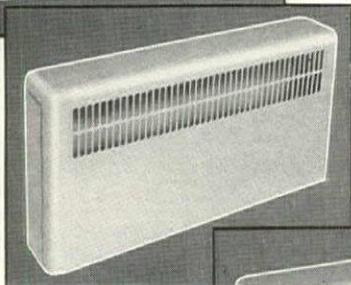
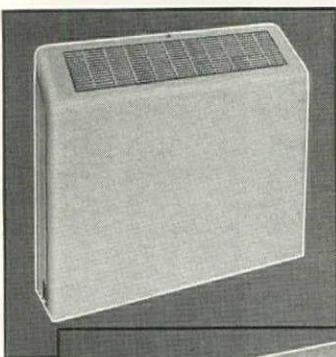
And at Fort Benjamin Harrison near Indianapolis, over a thousand Trane Convectors, the room heating units of today, are serving the important Billings General Hospital buildings, illustrated above.

The Trane line, the nation's number one line of heating, cooling and air conditioning equipment, is available to the architects, engineers, contractors and builders for American industry and national defense through 85 Trane offices from coast to coast.

Trane Sloping Top Convectors (above) are used throughout the Billings General Hospital at Fort Benjamin Harrison near Indianapolis, Indiana, to provide clean, even warmth.

A WIDE SELECTION

The three Convector models illustrated here suggest the wide variety of sizes, models and styles available to meet any building requirement. The Trane Convector is available with recessed and semi-recessed cabinets, as well as many wall hung and free standing models.



THE TRANE COMPANY

LA CROSSE, AIR WISCONSIN

Also TRANE COMPANY OF CANADA, LTD. • TORONTO, ONTARIO

HEATING • COOLING • AIR CONDITIONING EQUIPMENT FROM 85 OFFICES



IN 4-Square Endless Lumber the same principle of endmatching is applied to softwoods, which for years has been so successfully used in finished flooring.

Tongued and grooved on ends and edges, Endless Lumber speeds up work and effects great savings in both labor and materials.

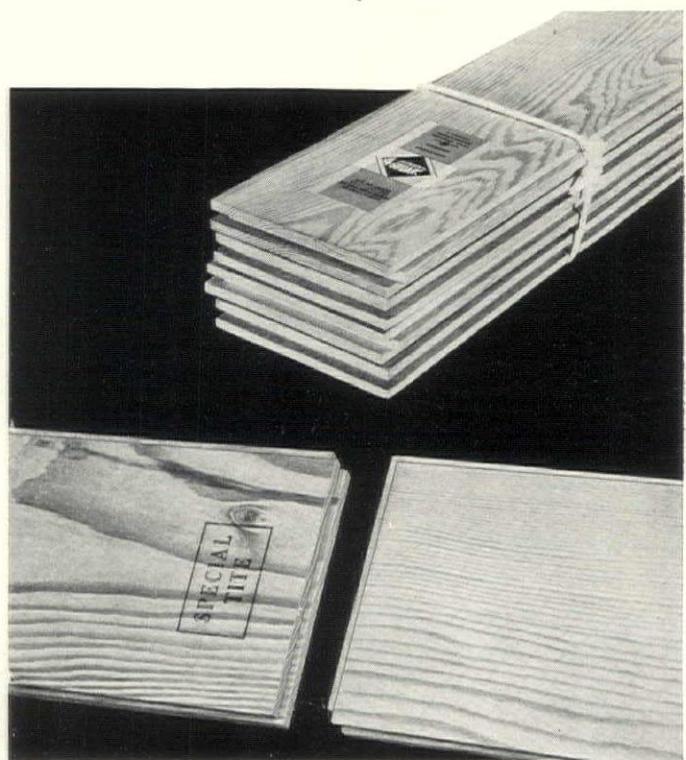
Ends do not have to meet on studs, joists or rafters. Trimming to join over framing members is entirely eliminated. The piece the carpenter saws off at the end of one course may be used to start another. There is also a saving in nails and nailing time. Double nailing over framing members is avoided.

Where diagonal application is desired for added strength in sheathing and subflooring, costs are greatly reduced when Endless Lumber is used. As a result, this desirable method of application can now be universally and economically employed. In the newer and wider use of air conditioning, condensation in walls has become a serious problem. When wood sheathing is used, experience has proven that this problem is definitely minimized.

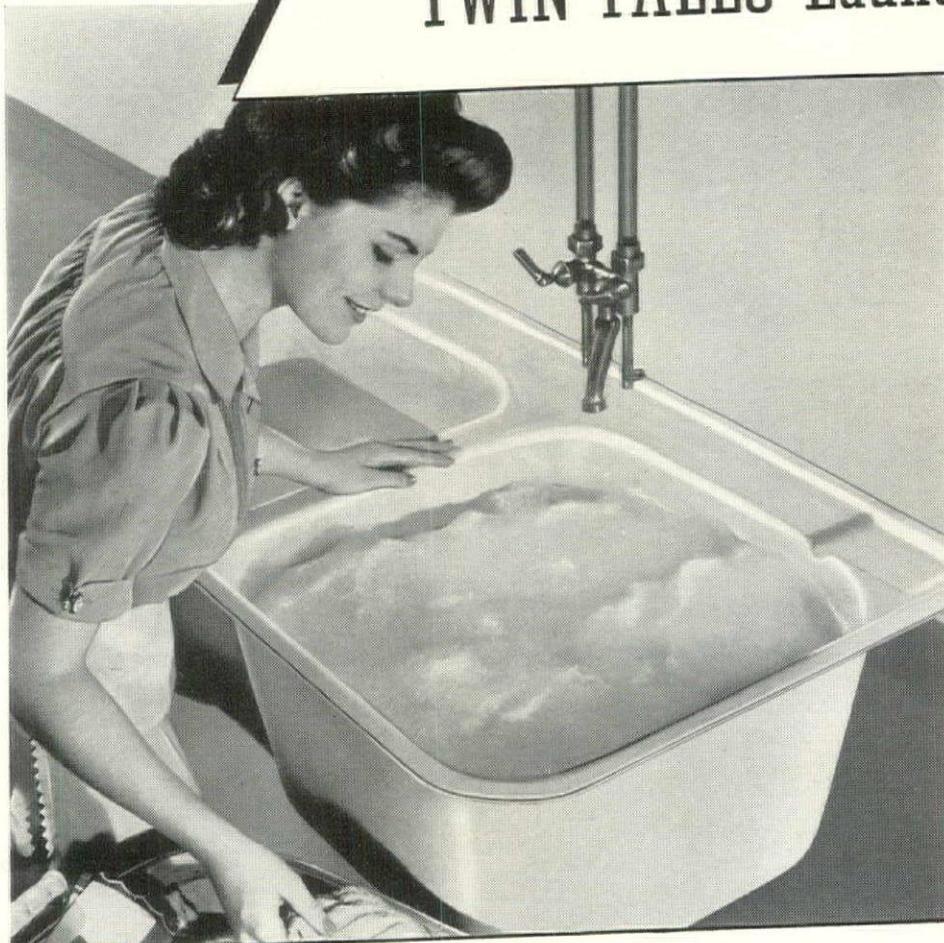
Write for 4-Square descriptive folder on Endless Lumber.

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FIRST NATIONAL BANK BUILDING • SAINT PAUL, MINNESOTA

4-SQUARE
Endless^{*}
LUMBER
* FOR MODERN IMPROVED
SHEATHING AND SUBFLOORING



Kohler offers new and exclusive TWIN FALLS Laundry Tray



CHECK THESE 5 POINTS



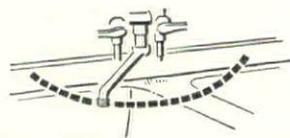
Gleaming, easy-to-clean, acid-resisting enamel—on rigid one-piece cast iron.



Full-length 3½-inch general-purpose ledge. Soap dish for each tub.



Flat, smooth surfaces with rounded corners—safe for delicate fabrics.

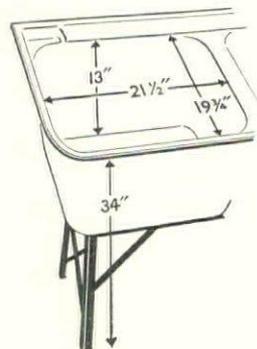


Long swing-spout mixer fitting with threaded end for hose connection.

To meet an increasing call for MODERN laundry conveniences

THE Twin Falls is the ONLY one-piece enameled cast-iron laundry fixture with built-in ledge. Notice the ample space for soap and cleansers—the big, roomy, easy-to-clean tubs. This modern, brightly enameled, free-standing fixture is just the thing for the first-floor laundry, as well as for the laundry in the basement.

Specify Kohler fixtures and fittings on all installations—and expect efficient, trouble-free service. Kohler offers first quality only, always fairly priced. All parts are built, assembled and shipped at one central point, under rigid quality control. Kohler quality costs no more. . . . Kohler Co. Founded 1873. Kohler, Wisconsin.



Length over rim is 48 inches; width 25 inches. K-6750-A.

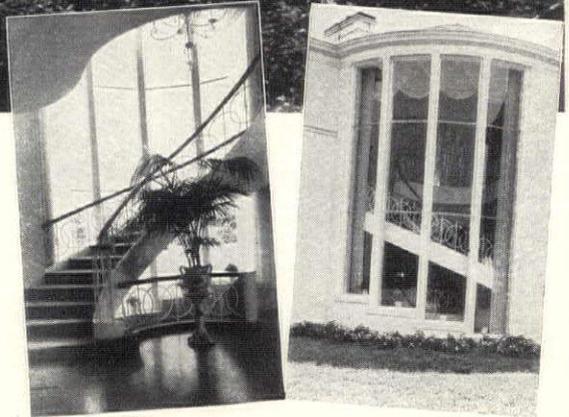
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PLANNED PLUMBING AND HEATING



RESIDENCE, JOHN F. MUCKERMAN, ST. LOUIS
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**PRATT & LAMBERT
PAINT AND VARNISH**



THROUGHOUT this stately home Pratt & Lambert Paint and Varnish have been used to decorate and protect the interior surfaces. The specifications included "61" Enamel (Eggshell and Gloss), Lyt-all Flowing Flat and Tonetic Flat Varnish. Most wood finishing problems are solved in the P&L Specification Manual (A. I. A. File No. 25c) which gives complete specifications for every type of finish. Write for a copy. If some distinctive finish is required for a particular project, specify the wood to be used and the general color desired, and your ideas will be carried out on specially-finished sample panels. Address the P&L Architectural Service Department nearest you. The opportunity to be of service will be welcomed.



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

• WRITE FOR THIS SIMPLIFIED, TIME-SAVING SPECIFICATION MANUAL •

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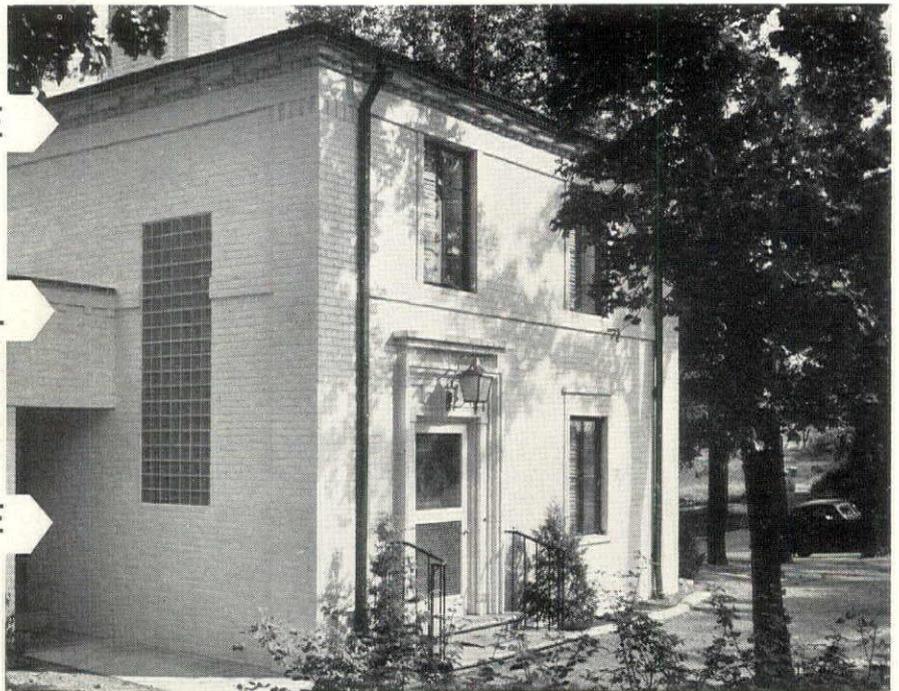
INSULUX is America's newest, most versatile building material.

PRACTICAL

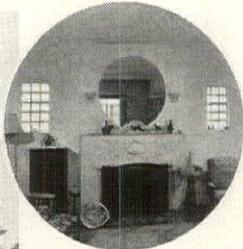
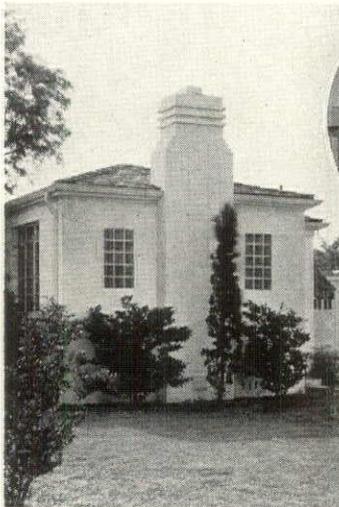
Some of the advantages: maximum daylighting, perfect privacy, high insulation value.

INEXPENSIVE

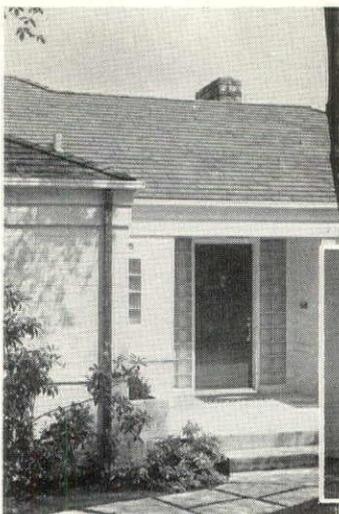
INSULUX Glass Blocks cost no more to install, per square foot, than good window sash, screened and painted.



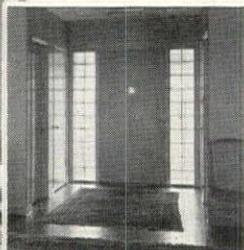
INSULUX GLASS BLOCKS ACCENT THE BEAUTY OF AMERICAN SMALL HOME DESIGN



● INSULUX Glass Blocks blend beauty and modern functional advantages with the traditional charm surrounding this typically-American architectural design.



● Panels of INSULUX Glass Blocks sidelighting doorway, as modern as tomorrow, blend gracefully with this modest home of modified colonial design.



Architects everywhere are finding that INSULUX Glass Blocks effectively enhance the charm and beauty of all styles of traditional American architecture.

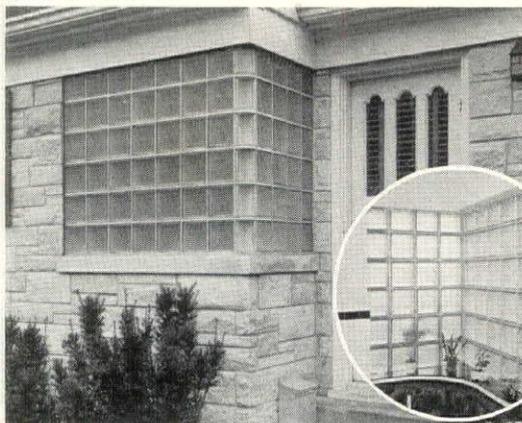
Panels of INSULUX Glass Blocks bring pride and lasting satisfaction to home owners, too. They transmit softly diffused daylight to living rooms, kitchens, hallways, bathrooms. They afford complete privacy, cut heating, air conditioning, maintenance, cleaning, lighting costs.

Architects specify INSULUX panels in all types of buildings from small homes to large factory and office buildings. INSULUX Glass Blocks are immediately available everywhere.

Owens-Illinois Glass Company, INSULUX Division, Toledo, Ohio.

OWENS-ILLINOIS
INSULUX
Glass Blocks

THERE ARE PLACES IN EVERY HOME THAT NEED INSULUX



● Breakfast nook gets maximum daylighting, with complete privacy, through the use of attractive, easy-to-clean INSULUX panels. INSULUX makes any home stand out from the ordinary!

Modern RU-BER-OLD products for low cost housing

Roofing
TIMBERGRAIN
*Asphalt
Shingles*



Sidewalls
VITRAMIC
*Asbestos-
Cement
Siding*

Pictured are two modern RU-BER-OLD Building Products that no member of the building profession should ignore. Both are ideally designed for low-cost housing and both contribute yearly dividends in economy, comfort and safety.

The first is Ruberoid's newest asphalt shingle sensation, **TIMBERGRAIN**. The textured surface is rough, rugged and built-up, eliminating the flat look frequently found in asphalt shingles and giving greater strength, more weather protection and more safety. The extra thick butts are accentuated by deep, black, built-in shadow lines, providing a roof of character, massiveness and beauty. The colors are attractive blends of Greentone, Redwood, Bluetone and Slatetone—beautiful color effects that add outward beauty to the roof's inward long life and durability.

For sidewalls, you will appreciate RU-BER-OLD Vitramic Asbestos-Cement Siding. This new ceramic-like asbestos siding resists dirt, repels rain, for all pores are closed and there is no foothold for dirt. Neither water nor dampness darkens it. Dust spatters are easily wiped off. Vitramic siding is fireproof, rotproof, and termite-proof. It not only gives new life and freshness to a home, but preserves that freshness and reduces upkeep expense.

For low-cost housing we urge you to investigate both these products. You will find that they will help cut building costs, reduce upkeep expense and provide your clients with more home for their money. Get all the facts. Write for free literature today. Address Dept. AF-10, The Ruberoid Co., 500 Fifth Avenue, New York, N. Y.

RU-BER-OLD
ROOFING AND BUILDING PRODUCTS



MONTH IN BUILDING

(Continued from page 72)

CLEVELAND'S CODE

First city to adopt the building code plank in THE FORUM'S Post-War Pattern (ARCH. FORUM, Sept. 1941, p. 139) is Cleveland. Month ago the local Chamber of Commerce made funds available and will soon employ "the best available building code engineer to revise and recode the city's antiquated building requirements and to recommend changes in building codes of suburban communities in Greater Cleveland." The Chamber's continuing efforts toward recodification were brought to a

head this summer by the fact that building activity in Metropolitan Cleveland is up 68 per cent from last year.

DEMOLITION PROGRAM

Another plank in THE FORUM'S Post-War Pattern (see above) is the demolition of substandard buildings. Long recognizing the strength of this plank, Everett, Wash., a city of 31,000, last month announced the three-year results of its voluntary demolition program: 150 derelicts have bitten the dust. Also attributable to this program is a notable elimination of fire hazards and a general increase in repair and new construction activity.

Prior to the launching in 1938 of this demolition drive by the local fire marshal and commissioner of public safety, a survey of the city's insurance rating schedule indicated that 288 deficiencies existed as a penalty against structural conditions, with 104 of these marks a direct charge against building hazards. Since 1938 about 80 serious fire hazards have been removed from Everett's high value districts and a welcome premium saving has, of course, resulted. Still more significant is the fact that the demolition campaign has been carried out on a personal interview basis rather than on compulsory condemnation action as provided by ordinance. For instance, of the 43 buildings eliminated in 1938, all but three were voluntarily torn down.

Advertising the city's accomplishments in an effort to get other cities to follow suit, the American Municipal Assn. attributes the success of Everett's campaign to the education of the public on the necessity of demolition as a fire prevention and safety measure and as a means of boosting the city's business.

STANDARDIZATION PLUG

At mid-August Assistant Attorney General Thurman Arnold, Government's chief trust-buster, advised the Commerce Department that he approved of simplified practices developed by the Bureau of Standards to reduce the number of styles and sizes of various manufactured articles in the interests of national defense. Commented Under-Secretary of Commerce Wayne C. Taylor: "This should allay fears in the minds of manufacturers that they might violate the anti-trust laws if they took concerted action in the line indicated."

BUILDING HEATERS

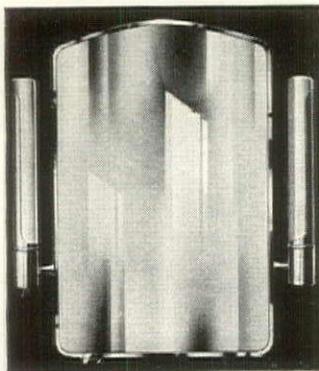
While the petroleum shortage warnings of Interior Secretary-Oil Coordinator Harold Ickes were last month branded as an unnecessary scare by a Congressional investigating committee, they have already had a measurable effect upon the building industry. The measure: trends in the sales of various types of heating equipment as compiled by the Commerce Department. Thus, while the 149,211 oil burners sold during 1941's first six months represented a 64 per cent advance over last year, the June 1941 volume of 32,521 was 10 per cent shy of that for the preceding month.

Meanwhile, the number of mechanical stokers sold for all types of heating purposes bounced up 18 per cent from 21,787 in June to 26,449 in July. At the half-year mark 1941 stoker sales totaled 67,308, almost double the comparable 1940 figure of 37,467, nearly three times as big as 1939's half-year volume of 26,990. Stokers sold for installation in one-family houses accounted for 62,144 of the 1941 sales, 33,516 of the 1940 sales.

(Continued on page 86)

From LOG CABIN
to **WHITE HOUSE...**

There's a LAWSON Cabinet
for every type of home and building



FOR THE MASTER BATH

This Lawson Vitreous Porcelain-Finished Cabinet is available in a variety of styles and sizes, with or without tubular side lights.

THERE is a Lawson bathroom cabinet that will harmonize perfectly with every one of the homes you design; that is priced to fit every budget. For Lawson manufactures *three* complete lines of recess bathroom cabinets plus a complete line of wall type cabinets.

For the finest homes you'll want to specify handsome Lawson "Time Proof" cabinets. Ten "more-than-just-talking-point" features include a lifetime vitreous porcelain finish, easy-to-clean rounded corners, and complete stainless steel and chromium plated brass hardware.

And for all other requirements, including budget homes, low-priced housing projects, servants' quarters, etc., you'll wish to specify cabinets from the two complete lines of lower priced baked enamel cabinets. All are fully described in Sweet's Catalog 84, Section 27.

THE F. H. LAWSON COMPANY
Bathroom Cabinet Division, Cincinnati, O.



SOLD EXCLUSIVELY THROUGH WHOLESALE OUTLETS



FOR HOME...FOR BUSINESS

A few yards of carpet for your client's living-room . . . a thousand yards for his business. Alexander Smith does both — has been doing it for almost a century. That's why so many architects specify this famous floor covering . . . why you find it in practically every city and town of the United States — in homes, offices, stores, hotels, theatres, clubs, public buildings — wherever quality carpet is called for.

ALEXANDER SMITH CARPET



**"NEARLY RIGHT" WON'T DO
IN CARPET COLORS**



A Structural Glass that
is finely-machined
—gives you a better job!

HERE IS A TOILET ROOM in the Hermitage Hotel, Nashville, Tenn., which illustrates the design possibilities of Carrara Glass. Black Carrara walls, with horizontal bands in a contrasting color of Carrara, and Black Carrara stiles and partitions, create a most effective room. Architects: Marr & Holman.

IN toilet rooms, lobbies, public building applications... wherever you want to be sure of a quality structural glass job... it is wise to select a precision-made structural glass like Carrara.

Only a finely-machined product can assure you that joints will be true and even, without lippage. Only a precision-made glass can be counted on to be absolutely free from warpage. Only a glass that is mechanically ground and polished like Carrara provides maximum beauty and accurate reflections.

Carrara Glass never checks, crazes, fades or stains. It won't absorb odors. It is unaffected by moisture, chemicals, pencil marks. It is easy and inexpensive to keep clean. Its original

good looks are permanent. It can be decorated by sand-blasting, fluting, shading, or painting for ornamental purposes. And for special effects, there is a new Suede-finish Carrara with softened surface reflections.

Write for our free booklet "Car-

rara, the Modern Structural Glass." It contains full information on Carrara's physical characteristics, the colors available, construction details and other helpful data. Address Pittsburgh Plate Glass Company, 2174-1 Grant Building, Pittsburgh, Pa.

"PITTSBURGH" stands for Quality Glass and Paint

CARRARA

The modern Structural Glass

PITTSBURGH PLATE GLASS COMPANY

Armstrong Tire & Rubber Co.'s Natchez (Miss.) plant includes a 160 x 760-ft. factory, office building and power plant. Architectural Concrete exterior walls; reinforced concrete Z-D barrel shell roof with 40 x 50-ft. clear bays. Roberts & Schaefer Co., Chicago, engineers. J. T. Canizaro, Jackson, Miss., architect.



Industry endorses CONCRETE for economy, firesafety, appearance



Warehouse for Woodbury & Company, dealers in industrial supplies and heavy hardware, Portland, Oregon. Richard Sundeleaf, architect. Wegman & Sons, contractors.

(Below) Engine test house, Pratt & Whitney Aircraft Division of United Aircraft Corporation, East Hartford, Conn. Albert Kahn, Detroit, architect. R. G. Bent Co., Hartford, contractor.

Architectural concrete offers a unique combination of advantages for industrial and defense buildings:

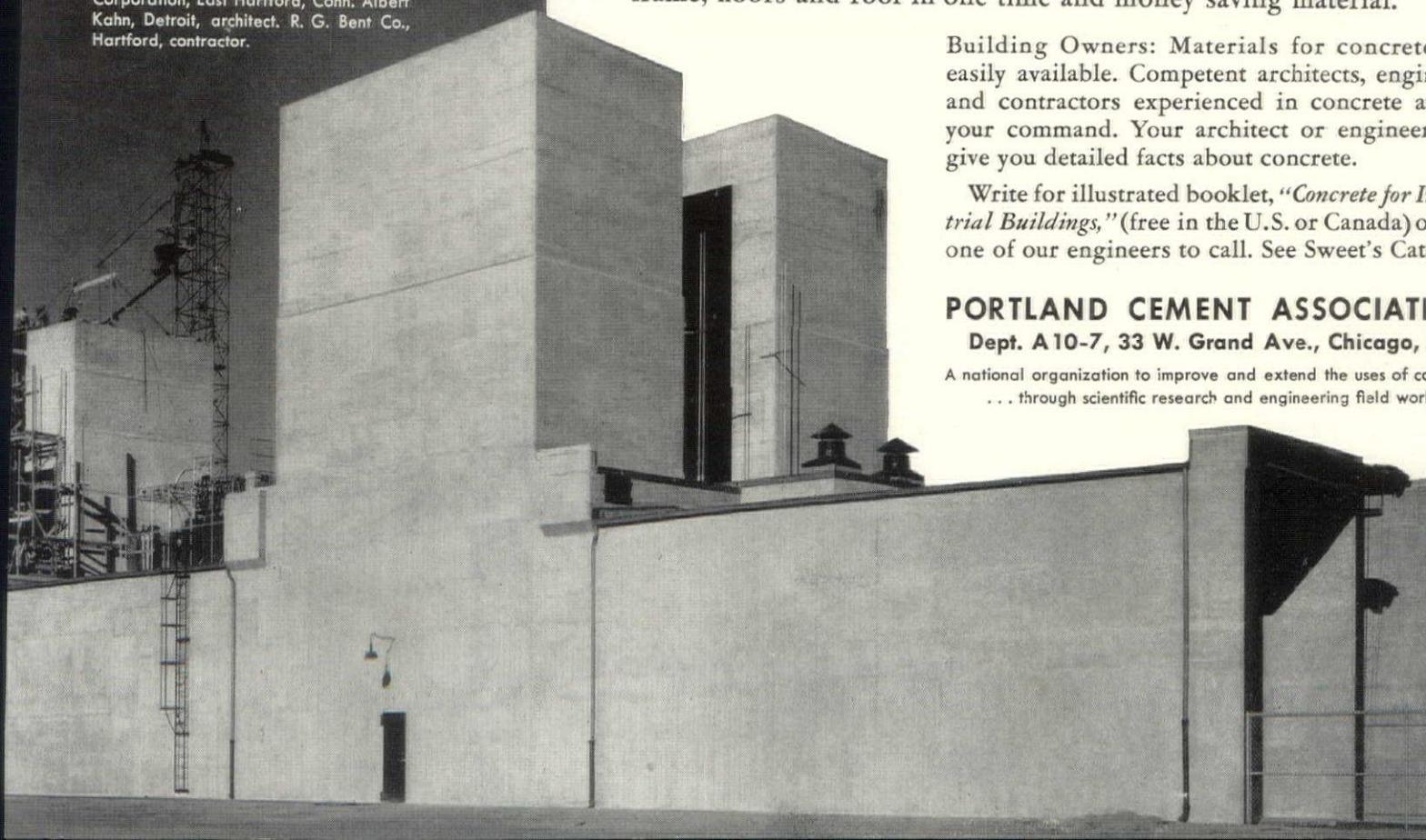
- **SPEEDY** construction; contractors are setting constantly faster schedules in completing concrete buildings. Concrete jobs proceed all winter.
- **ECONOMY** in first cost and maintenance.
- **ADAPTABILITY** to any requirements of occupancy; for example, clear interior spans are easily provided.
- **FIRESAFETY**—concrete can't burn; supports heavy loads even at high temperatures.
- **WEAR RESISTANCE** for heavy-duty floors and ramps.
- **RIGIDITY** to dampen vibration and resist shocks.
- **GOOD APPEARANCE**—Architectural concrete has won national recognition as a means of giving outstanding architectural distinction to factories and buildings of all kinds. Walls are cast integrally with frame, floors and roof in one time and money saving material.

Building Owners: Materials for concrete are easily available. Competent architects, engineers and contractors experienced in concrete are at your command. Your architect or engineer will give you detailed facts about concrete.

Write for illustrated booklet, "Concrete for Industrial Buildings," (free in the U.S. or Canada) or contact one of our engineers to call. See Sweet's Catalog.

PORTLAND CEMENT ASSOCIATION
Dept. A10-7, 33 W. Grand Ave., Chicago, Ill.

A national organization to improve and extend the uses of concrete
... through scientific research and engineering field work



MONTH IN BUILDING

(Continued from page 82)

LUMBER PRICES

At mid-August Price Boss Leon Henderson placed ceilings over Southern pine lumber prices at levels averaging \$3 per 1,000 bd. ft. below the then current prices. But, before the regulation became effective on September 5, he raised the ceilings by \$1.50 to \$4 per 1,000 bd. ft. His reason: "I have received many complaints from mills throughout the Southern States asserting that . . . widespread hardship would result. . . . It has always been the policy of this office to investigate complaints of

this nature and to make such adjustments as appear to be warranted . . ." The new ceilings are still below the price levels of mid-August, and Henderson believes that the net annual saving in Southern pine lumber costs to the Government and civilian consumers will still be close to his original estimate of \$20 million.

At the time of the price fixing, 1941 Southern pine production was 17 per cent ahead of 1940—slightly ahead of the lumber industry as a whole (up 13 per cent).

COST BREAKDOWNS

Building cost breakdowns, like building costs themselves, vary depending upon

the type and location of the buildings. Believing that an average cost breakdown for a large representative cross-section of the country would cast interesting light on the subject, the Dow Service this summer examined the construction costs of some 200 buildings in twelve cities coast to coast, last month released the average breakdown for buildings falling in the residential and non-residential classifications:

<i>Contract</i>	<i>Res.</i>	<i>Non-Res.</i>
Masonry	26.5%	37.9%
Carpentry	27.3	6.4
Plumbing	10.1	5.2
Lath & plaster	8.2	4.3
Heating & vent.	6.6	6.6
Paint & paper	4.7	1.6
Electrical	4.5	6.6
Tiling	3.5	1.7
Roofing	1.8	1.3
Excavating & grade	1.3	2.5
Steel	—	8.7
Elevators	—	7.6
Glazing, hardware & misc.	5.5	9.6
Total	100.0	100.0

Cost data on which the compilation is based include labor and materials but exclude overhead expenses, profits, cost of land, financing charges and architects' fees. While interesting, the tabulation would have proved more useful had Dow shown a breakdown for each type of residential and non-residential building. As it is, data for low cost frame houses are averaged with that for multi-story masonry apartment projects, and one-story factories which are essentially windows and roof are mixed in with skyscrapers whose primary components are walls, floors and elevators. It is a strange factory that has 7.6 per cent of its cost in elevators.

More meaningful is the cost breakdown compiled last month by the Home Owners' Loan Corp. based upon its eight years of reconditioning experience. From its organization in 1933 to April 1, 1941, HOLC modernized some 550,000 houses to the tune of \$166 million, distributed the money thus:

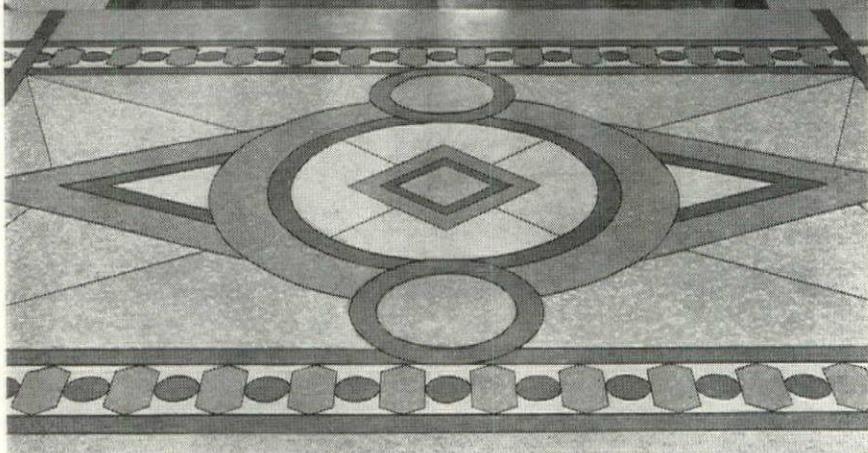
<i>Contract</i>	<i>% of total</i>	<i>Proportion allocated to</i>	
		<i>Labor</i>	<i>Materials</i>
Exterior painting	20.6%	65%	35%
Carpentry & millwork	19.2	55	45
Roofing and sheetmetal	14.8	40	60
Heat., plumb., & elect.	12.4	45	55
Interior painting	10.7	65	35
Papering	5.5	60	40
Masonry	4.2	60	40
Plastering & stucco	3.4	65	35
Refinishing floors	3.3	65	35
Landscaping, walks & drives	0.4	45	55
Stoves & ranges	0.4	10	90
Linoleum, shades, hardware, cleaning, etc.	5.1	55	45
TOTAL	100.0%	55%	45%

Chances are that the distribution of all remodeling money spent on one-family houses follows closely this HOLC pattern.

Perpetuate Beautiful floor designs in LIFETIME TERRAZZO

Why labor over well-thought-out floor designs and then sentence them to a limited existence? Your designs deserve better treatment—they deserve to last—and they will, in lifetime terrazzo. In this better floor material colors improve with age. Terrazzo does not break out in a rash of holes, or become dished in spots of heavy traffic. It needs no costly refinishing, waxing, repairs or replacement—that's why it has the lowest cost per foot per year. Besides, terrazzo is sanitary, easy to clean, inviting, practically non-absorbent, in fact terrazzo has everything. Give your floor designs a break—let them live for the future—perpetuate them in lifetime terrazzo. For latest information see our catalog in Sweet's or write

NATIONAL TERRAZZO & MOSAIC ASSOCIATION
1420 NEW YORK AVE., N.W. DEPT. G • WASHINGTON, D. C.



Terrazzo Floors **LOWEST COST PER FOOT PER YEAR**

There's **BUDGET-MAGIC** in this low-cost floor



CREATING fine floors in Armstrong's Asphalt Tile is easy, and easy on the budget! Its first cost is surprisingly low—its appearance surprisingly luxurious.

The forty-one different plain and marble colorings, the variety of shapes and sizes which are hand-set a block at a time, provide almost unlimited design possibilities. Special insets (trade-marks, insignia, etc.) can be cut to order for very little extra cost.

The way this tough floor wears also puts it in the quality class. Scuffing feet can't dim its beauty because the colorings run right through the composition. And, no matter how much traffic Armstrong's Asphalt Tile has to withstand, it never needs costly refinishing.

This floor is easy to take care of, too. Here's the simple routine: Sweep daily, wash and wax occasionally. That's all you need do to keep Armstrong's Asphalt Tile fresh and glowing with beauty for years.

Let us send you a color-illustrated book, free. It's called "Low-Cost Floors with a Luxury Look." Armstrong Cork Company, Resilient Tile Floors Department, 1204 State Street, Lancaster, Pa.



YOU CAN SPRUCE UP ANY INTERIOR with a low-cost floor of Armstrong's Asphalt Tile like this one. This is the lobby of the Denver Y. M. C. A. John C. Reeves Co. installed the floor, using nine of the forty-one colors available. Armstrong's Asphalt Tile can be safely installed over concrete subfloors in direct contact with the ground, as in basements.

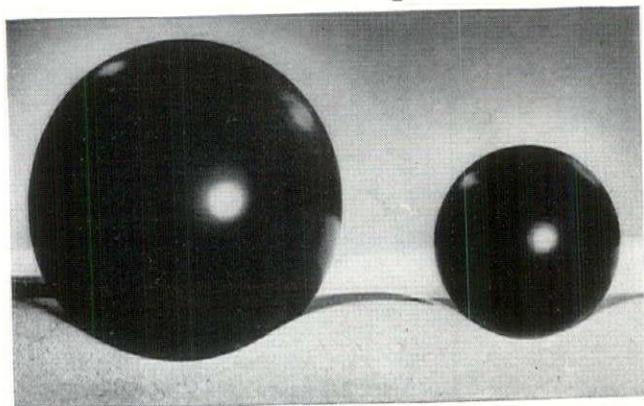
ARMSTRONG'S
Asphalt Tile

THE LOW-COST
FLOOR WITH
THE LUXURY
LOOK!

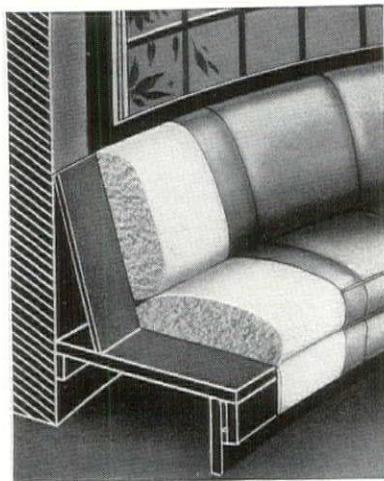


ARMSTRONG'S LINOLEUM • LINOTILE (OIL-BONDED) • CORK TILE • RUBBER TILE • LINOWALL

This is one of your clients
resting on *Koyalon*



Koyalon is the modern material that replaces complex upholstery parts with one molded piece. Above you see how sensitively this springy-soft latex foam responds to weight and shape. In this case the weights are bowling balls. But Koyalon adjusts itself just as perfectly to the *various weights and shapes* of the human body. Which means Koyalon supports more evenly and completely, therefore more restfully.



**Simplifies
built-in seating**

Koyalon provides both *softness* and *springiness* in a single material—pre-shaped, ready to apply to any base. Does a more beautiful job because it comes already molded to perfect form for the upholsterer. The beauty and comfort last longer, too—Koyalon contains no metal parts to sag or padding to pack out of shape.

**Springy—yet
softer than
a baby...**

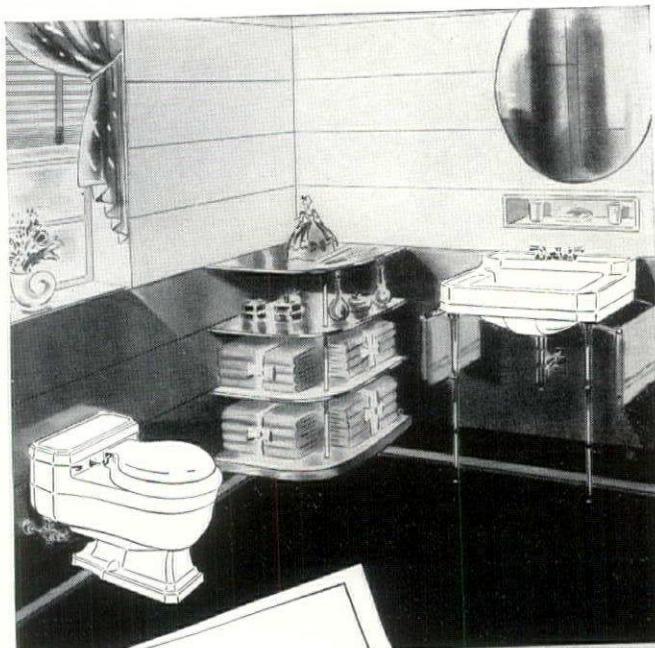
Note how Koyalon shapes *itself*, instead of shaping the baby. Alive with the resiliency of millions of tiny latex springs, yet softer than a baby, Koyalon never compresses muscles fatiguingly. Another reason why, in modern seating, Koyalon means comfort.



● ● ● ● ● MAIL FOR EASY WORKING DETAILS ● ● ● ● ●

UNITED STATES RUBBER COMPANY  *Koyalon*
1230 Sixth Avenue • New York FOAM CUSHIONING

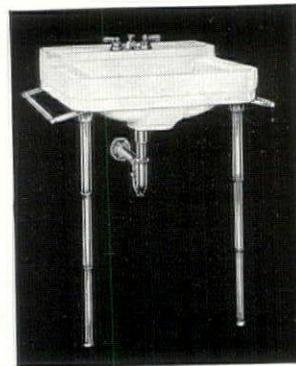
USE THE MARGIN BELOW FOR YOUR NAME AND ADDRESS



Whenever you notice the beauty of bathrooms built around Case fixtures, you can be sure long-lasting satisfaction is there, too. Case fixtures are all of glistening, easy-to-clean, *twice-fired* vitreous china—and they are specified by architects for all types of construction. Available in 60 colors and in White—distributed nationally by plumbing supply wholesalers. Write to: Dept. E-101, W. A. Case & Son Mfg. Co., Buffalo, New York.



America's most popular Water Closet is the quiet type, non-overflow, one-piece T/N. An exclusive patented Case fixture.



The smart WINSTON Lavatory has a shelf back, concealed front overflow and splash control.

CASE

DISTINCTIVE PLUMBING FIXTURES



YOU WON'T
HAVE TO ASK THEM TO

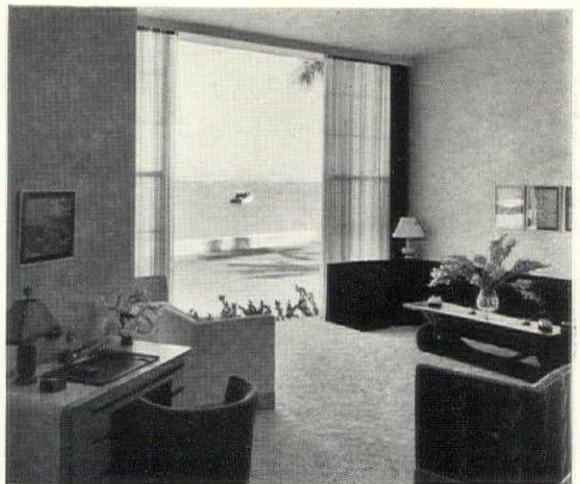
"Picture"
A
PICTURE
WINDOW

**Public is Pre-Sold on Modern Glass Features
by Libbey-Owens-Ford Intensive Advertising
Drive on Glass Designed for Happiness**

Include a Picture Window of Libbey-Owens-Ford Polished Plate Glass in your next set of residential plans, and it's a hundred to one your clients will give hearty approval. They have admired the ones shown in the Libbey-Owens-Ford national advertisements. In fact, they have been sold on many modern glass features Designed for Happiness which have been illustrated in this full color campaign.

Here is an activity planned to win more latitude for the architect in his creation of glass applications. It makes the public more aware of the smartness, charm and convenience which glass bestows on the modern home. It offers suggestions in the form of a group of popular designs. It inspires many prospective home owners to want *something different in glass* — opens the way for your services.

Whether for large home or small, include glass features in your plans. You will discover that the Libbey-Owens-Ford Glass Designed for Happiness campaign has sold them before your clients even see the blueprints. Libbey-Owens-Ford Glass Company, Dept. AF1041, Nicholas Building, Toledo, O.



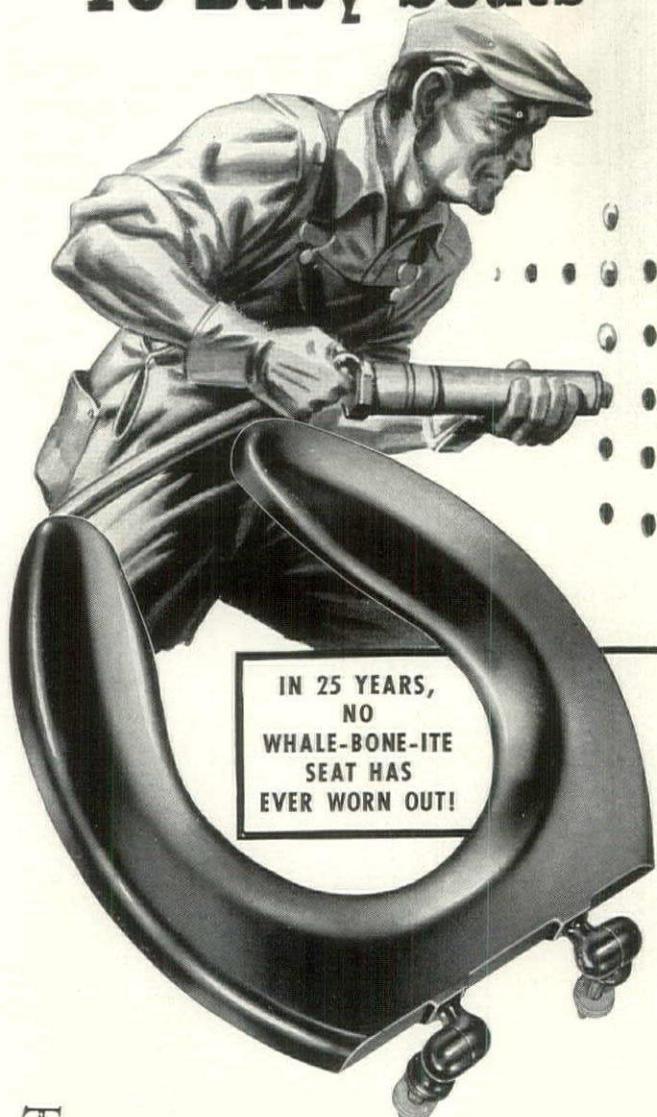
GLORIOUS VIEW of the bay or simple view of an attractive garden — the modern Picture Window of L·O·F Quality Glass has its place in homes both large and small.

EVERY FOURTH FAMILY is reached by L·O·F Glass Designed for Happiness national advertising.



L·O·F LIBBEY · OWENS · FORD
glass Designed for Happiness

He's Not The Kind To Baby Seats



IN 25 YEARS,
NO
WHALE-BONE-ITE
SEAT HAS
EVER WORN OUT!

There's a big job ahead for defense workers. There's no time for babying plant equipment that can't stand the "gaff."

Scuffs, slams and bangs don't mean a thing to Whale-Bone-Ite Closet Seats—not to their sealed-in laminated core, molded-in hinges, and tough, thick molded composition hide. Whale-Bone-Ite Seats are moisture-proof; don't warp, and have no surface coating to wear off.

Now—at no extra cost—Whale-Bone-Ite Seats will protect busy defense plants against replacement costs. Yet, long after defense they'll still be on the job.

THE BRUNSWICK-BALKE-COLLENDER CO.
623 South Wabash Avenue, Chicago, Illinois
MAKERS OF FINE CLOSET SEATS FOR EVERY INSTALLATION

Brunswick

WHALE-BONE-ITE CLOSET SEATS

PLASTIC-COATED WALLBOARD A DEFENSE NEED

BARCLAY A "PREFABRICATED WALL"

Filling a vital need for efficient building materials, Barclay has developed a tileboard that is a low-cost, virtually prefabricated wall or ceiling! In Defense Housing, especially, Barclay Tileboard means a factory-finished wallboard that is easily and simply installed with extreme speed—and with minimum labor!

Barclay's plastic-coated, glass-like surface has been toughened to give years of enduring service. It eliminates constant redecoration . . . does away with ever-recurring cracked walls and ceilings! Made in 3 attractive surface patterns and a wide variety of color combinations, Barclay makes even the standard-plan home individual, personal!



BARCLAY SPEEDS DEFENSE HOUSING

Kitchen above: Yellow & White Tileboard; Yellow Panelboard ceiling. Bathroom: gleaming White Panelboard on right wall, shower & ceiling; Royal-Bl. over tub.

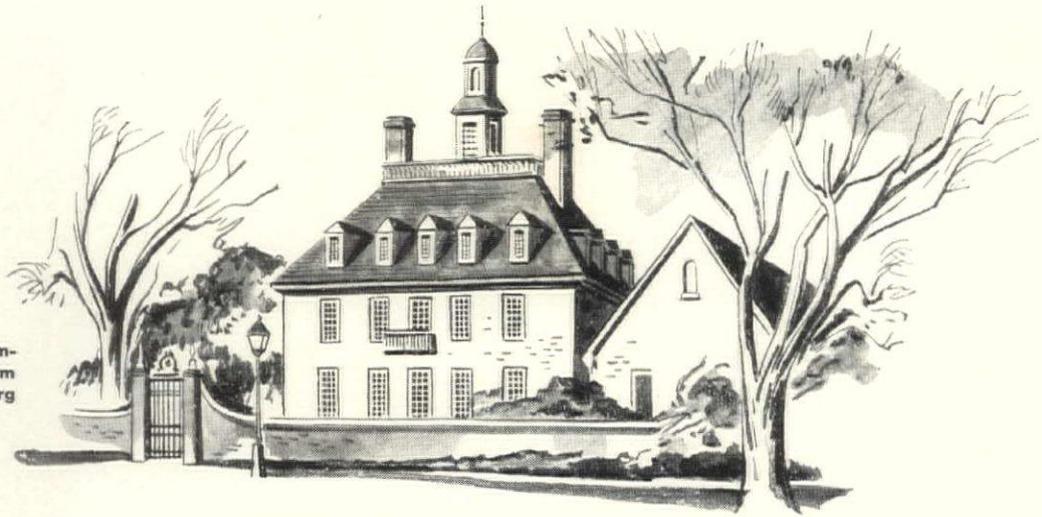
Progressive Building Material Dealers everywhere stock Barclay Tileboard!

Our Catalog in SWEET'S is Up-to-Date!

BARCLAY
FOR WALLS & CEILINGS

© BARCLAY MFG. CO., INC.
BRONX, NEW YORK

The Governor's Palace, symbolic of the architectural charm and color of the Williamsburg Restoration.



PITTSBURGH ANNOUNCES

A New Line of Wallhide in Authentic Williamsburg Colors

Approved by

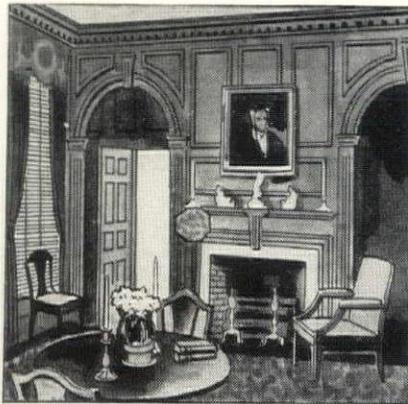
COLONIAL WILLIAMSBURG, INC.

Architects know the tremendous influence that the Williamsburg Restoration has had on home decoration. That's why you will appreciate the possibilities of Pittsburgh's Wallhide in colors approved by Colonial Williamsburg, Inc.

CAPTURING the charm of Virginia's 18th Century Capitol, these exclusive, authentic shades bring Williamsburg's lovely tones to the home builder and home decorator—well within the price of ordinary flat wall finishes. And yet, like the entire Wallhide line, they are quick-drying, long lasting and easy to apply.

Your clients and prospective clients will be talking about this wonderful new line of colors. That is why Pittsburgh would like to place in your hands material which will help you in making your paint specifications.

These colors can be used with most styles of architecture . . . either for new work or redecorating. Please clip the coupon at the right for our color card booklet on Wallhide in colors approved by Colonial Williamsburg, Inc. It will be sent without obligation, of course.



The Parlor At The Raleigh Tavern. The simple dignity . . . the quaint charm of Williamsburg . . . can be sensed in this stately room. The deep Raleigh Green that covers its walls and is carried through in drapes and other appointments, is only one of the rich and lovely shades now available in Pittsburgh's new line.



Pittsburgh is proud to have been chosen by the authorities of Colonial Williamsburg to manufacture and sell these authentic colors . . . *exclusively*. Naturally we want to be of every service to the architect. Just clip the coupon at the bottom of the page, and we will send you our Wallhide Color Card Book in colors approved by Colonial Williamsburg, Inc.



Pittsburgh Plate Glass Company
Paint Division, Pittsburgh, Pa.
Please send me Color Card Book descriptive of Wallhide in colors approved by Colonial Williamsburg, Inc.

Name _____
Address _____
City _____ State _____

AF 10-41

LETTERS

(Continued from page 24)

I would like to offer the following comments with specific reference to some of Mr. Hudnut's statements:

1. At the Washington Airport, a large and adequate central ticket office in the waiting room is necessary because, contrary to Mr. Hudnut's assumption, the largest portion of the passengers purchase their tickets directly at the airport and not in the city ticket offices of the re-

spective air lines.

2. His proposal of a "unit system" of passenger gates, stretched out "at intervals in a long and uniform barrier" to make possible more direct access to planes from motor vehicles driven directly to these gates, is of course a hypothetical argument for "split second" time-saving in getting the passengers to the planes without the need of their passing directly through the terminal building and passenger concourses. "Decentralization" as far as possible for complete separation of passenger traffic is to be desired, but the problem is not quite that simple in a large air ter-

minal where many coordinated factors enter into the picture along with the problem of passenger-circulation, and that within very definite limits of space control.

Without interference to both passenger and spectator-circulation, there must be an easy movement of baggage to and from planes, also the handling of air mail and air express. Provision must also be made for these services in high speed circulation.

Plane loading stations must be placed in such safe distances apart as to permit the largest planes to easily maneuver on and off of the loading ramp, and in close enough proximity to the terminal building to permit the passengers the shortest line of travel to and from the planes.

3. Referring to the statement that the segregation of spectator-circulation and passenger-circulation is half-hearted and futile, this is entirely a mistaken observation. On the contrary, the spectator-circulation is entirely separated from the movement of passengers in and out of the building by the use of bridges at the North and South ends of the terminal building which lead directly to the spectator observation decks along the field side of the building.

One of the distinguishing features of this terminal is the two-level system of control which makes possible the use of the ground floor at the field level for the handling and circulation of baggage, airmail and air express along with the housing of the airline dispatchers and crews, equipment rooms, etc., along the entire field side of the building. The passengers and spectators on the entrance floor level above therefore in no way interfere with these vital and rapid moving field services. It may be of interest to point out, that with the large transport planes of the future having cabin floors some 10 ft. above ground, access to the planes will be provided from the first floor level directly out of the passenger concourses.

4. In the design of the terminal building, there is no intention to play up the design for spectacular purposes. On the contrary, the architectural form of the buildings followed as a logical result of the functions and services which must be provided.

5. Careful study of the plans will show a coordination and sequence which makes for the easy movements of passengers to and from planes with the least amount of interference to the control of the large number of spectators to be handled in and around the terminal building.

I regret that the plans of the terminal building and hangars together with the Master Plan of the site (were) not . . . included for publication along with Mr.

(Continued on page 94)



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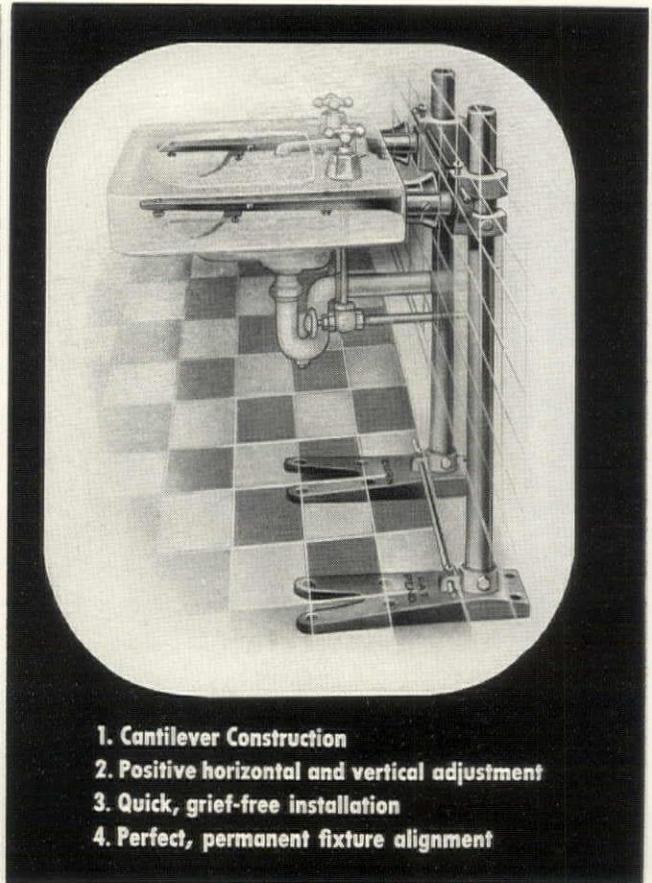
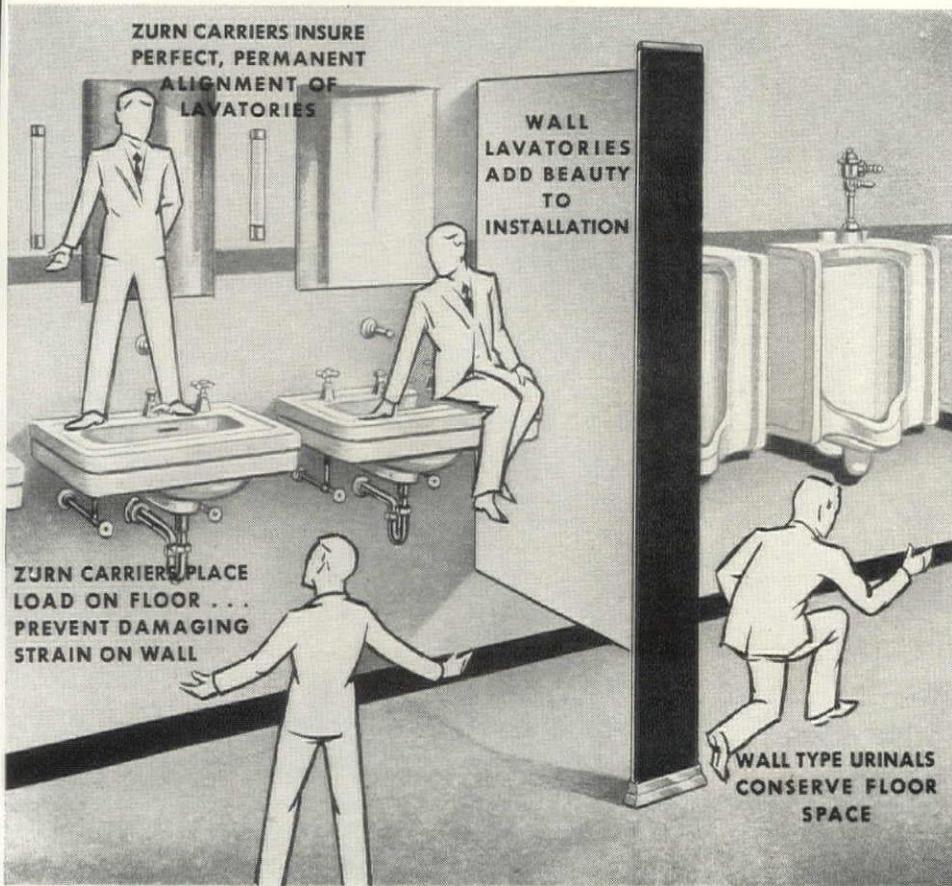


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That Omit This Vital **4-WAY PROTECTION** on Wall Fixture Jobs



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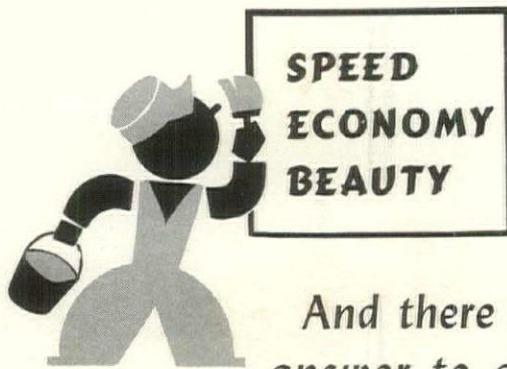
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P. S. Please attach to your business letterhead.

The "ABC" of Painting for Defense Construction



And there is one
answer to all 3

MURAL-TONE CASEIN PAINT

● We are told that of the 625,000 units of residential construction needed during the current fiscal year (July '41 to August '42) 525,000 units will be in defense areas.

● Defense construction calls for SPEED. When it comes to paint "Speed" is another way of saying Mural-tone. No waiting for walls to dry. The paint brush is used 3 days after the trowel—and one hour later the wall is in service.

● ECONOMY. Watch the expense—stretch every dollar. Mural-tone thinned with water only—applied with a wide brush that eats up wall area—is right in step.

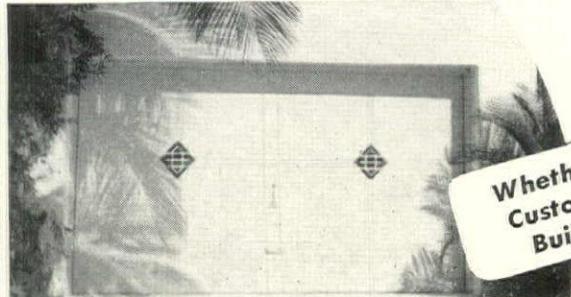
● But what about BEAUTY? Why not—when it costs no more! And in these trying nerve-racking days the aesthetic satisfaction that comes from COLOR in perfect harmony is a tonic for morale. The answer again—as America's leading architects know—is Mural-tone with its pure clear colors.

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There is a set of Stanley "Swing-Up" Hardware for any garage door. It can be as easily installed on specially designed doors as on any pair of stock doors. Old doors as well as new. This modern upward-acting hardware set gives you free rein on styling effects. But keeps costs down for your clients.

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Time was when shower stalls were found only in expensive homes, clubs and hotels. Today, few homes, large or small, are without stall showers or tub showers. This important development may be due to the increase in tempo . . . in business, in industry, in outdoor recreation on the part of young and old. Improvements in shower compartments, accessories, mixers, doors, curtains, etc., are also factors, because today's showers are both efficient and luxurious.

Tile makes a shower stall a thing of colorful beauty . . . is unaffected by water, and is easy to clean. A tile shower not only insures life-time enjoyment but is a strong talking point when selling or renting. Because of constant betterment of product and production methods, members of the Tile Manufacturers' Assn. are playing and will play their part in supplying showers to a more active America.

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50 East 42d Street



New York, N. Y.

LETTERS

(Continued from page 90)

Hudnut's article and the photographs of the airport.

6. Mr. Hudnut is quite mistaken in his criticism as to the difficulty of future expansion. The terminal building has been designed to make possible expansion to the South, around the rotary in the direction of the hangars, to a length of almost 500 ft., while on the North there is room for extending the passenger concourse and ground floor services for a quarter of a mile.

7. In considering the traffic routes in and out of the Mount Vernon Highway together with the provision for ample parking areas, it is well to bear in mind that these improvements are still to be completed, but they are all a part of the Master Plan.

8. The concluding statement of Mr. Hudnut's article, "It is a pity, I think, that it could not have been shaped to its useful ends with a greater immediacy and directness," is hardly a fair statement. To anyone who may visit this project and investigate its complete functioning as a modern air terminal, it will become apparent that form has followed function with directness and honesty of purpose.

The Washington National Airport was

conceived and developed as a result of a collaborative effort of architects and engineers working in close cooperation with the aeronautical staffs of the Civil Aeronautics Authority and the airlines. As a government project, it has been participated in by a number of government agencies. The plans were prepared in the Office of the Supervising Architect and in the development of the architectural design, the plans were reviewed and approved from time to time by an Advisory Board of Design comprised of several of America's most distinguished architects.

HOWARD LOVEWELL CHENEY

*Consulting Architect,
Washington Airport
Chicago, Ill.*

MOBILIZATION DU SOL

Forum:

Thank you for your kindness for the review of "Space, Time and Architecture" in your ARCHITECTURAL FORUM. The reviewer really took a deep insight into the book. I am only sorry that I could not discuss with him personally on some of his objections. I do not deny at all the importance of the economical background of city-planning and I helped myself to formulate the sentences of the Congress of Athens that real urbanism cannot be realized without as we call it "la mobilization du sol," without the possibility of disposing of the ground.

But we have, and you too, many publications concerning with the relation of property and urbanism. What I wanted to accomplish is just to show once the influence of feeling on practical decisions. . . .

S. GIEDION

Zurich

WANTED: CORRESPONDENT

Forum:

I value your magazine, since I am a student of architecture and it is very important for me to keep abreast of all building news.

But there is another thing that would interest me very much, and that is to correspond with a North American architectural student, to know the direction this career is taking in your country. Since my English is rather weak, I should prefer that this correspondence be in Spanish.

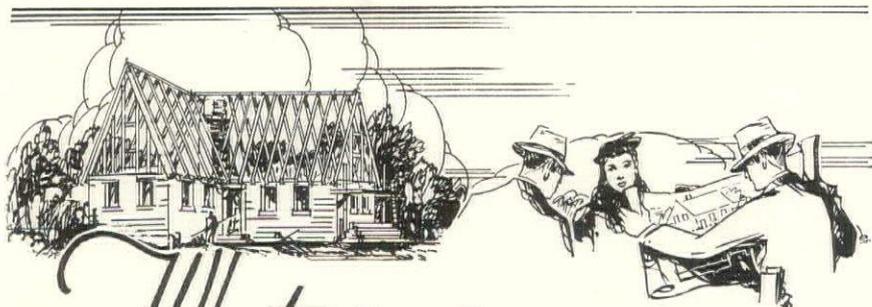
Please, if it is possible, let me know about some student center, or "club," as you call it, of some University which abounds in Spanish-speaking students. I understand that there are several in California.

This is a favor which I should appreciate very much, and no doubt when I tell your student center about it there will be a very active interchange of letters between the students of our countries.

I look forward impatiently to your reply. . . .

PERLA STELLA SCHAVELZON

*Paraguay 1949, 8° P. Dr° A
Buenos Aires, Argentine, S. A.*



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THIS winter?



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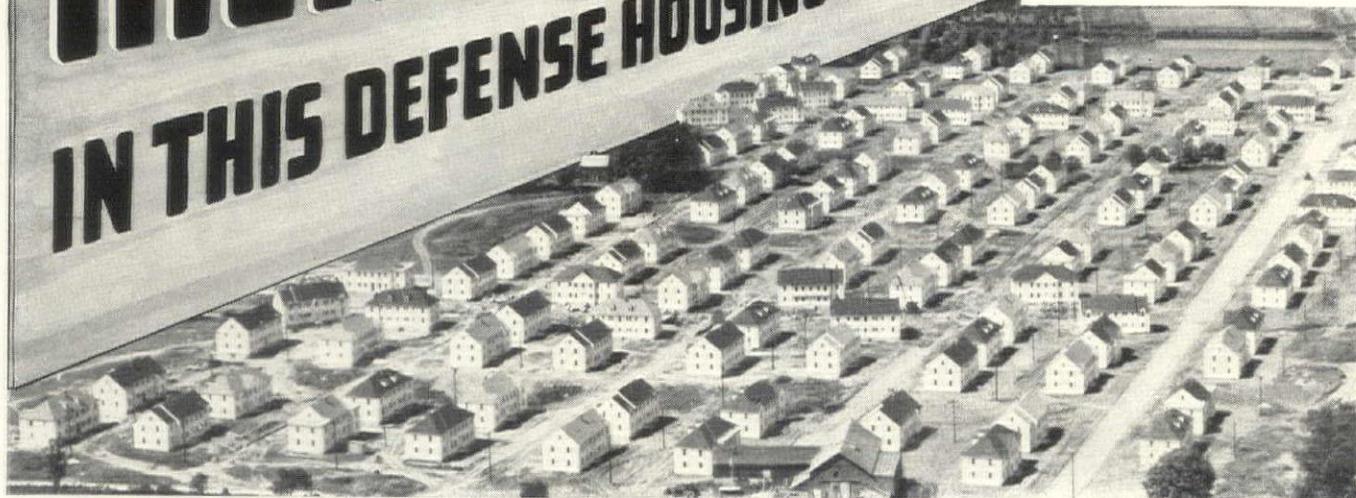
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"The Anchorage", U. S. Naval Housing Project at Newport, R. I. . . . 600 units—150 four-unit buildings. . . . W. W. Rausch, Architect. . . . Constructed by Holt-Fairchild Co., Arlington, Mass. . . . Mengel Bord furnished through Roddis Plywood and Door Co., Cambridge, Mass., Local Distributors.



IN CHOOSING the plywood for *all* walls and ceilings in this big new U. S. Naval Housing Project, the architect required a product which would not only be economical and durable, but would also give fine results *when finished with wall-paper and water paint.*

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If you are interested in speedy, *economical* dry-wall construction, ask your distributor for all the facts about Mengel Bord—or write us direct. *Address:* The Mengel Company, Incorporated, 1126 Dumesnil Street, Louisville, Kentucky.



Applying glue to Mengel Bord strips on studs, before installing Mengel Bord sheets.



Putting Mengel Bord sheets in place. Edges glued to strips on stud.



Sanding off glue at joints of Mengel Bord, and applying trim before papering and painting.

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AN EFFECTIVE CONSERVATION AND NATIONAL-DEFENSE MEASURE

THERMAL CONDUCTIVITY OF VARIOUS MATERIALS 1/

MATERIAL TESTED	DENSITY, LB. PER CU. FT.	CONDUCTIVITY
Air space between walls (3 1/2-in.).....		0.86 to 1.10
Cotton, compressed.....	0.081	.21 to .29
Pure wool.....	6.3	.26 to .32
Silk.....	6.24	.28 to .34
Hair felt.....	6.24	.26
Flax fiber.....	13.0	.31 to .33
Cork, ground.....	13.0	.27 to .31
Sugarcane fibers.....	8.1	.34
Pine wood.....	13.5	.8 to 1.0
Wood-pulp board, plaster base.....	34.3	.3 to .4
Mineral wool.....	16.2	.27 to .30
Asbestos sheet.....	21.2	.29
Magnesia (85 percent magnesia, 15 percent asbestos).....	48.3	
Expanded vermiculite, ZONOLITE	19.3	.47 to .51
Diatomite powder.....	6.0	.26
Diatomite blocks.....	10.6	.3 to .5
Pumice gravel.....	28.1	.58
Tile (clay and plaster).....	18.8	.64
Glass, plate.....	12.7	.60
Bricks, dry.....	15.5	3.5 to 5.5
Brickwork (mortar bond).....	125.0	3.0 to 6.0
Gypsum plaster.....	132.0	4.0 to 5.0
Concrete, 1-2-4.....	46.2	2.0 to 5.0
Slate shingles.....	150.0	5.0 to 6.0
Building stone.....	162 to 205	10.0 to 10.4
Steel, 1 percent carbon.....	165.0	12.5
Copper pure.....	489.0	314.0 to 328.0
Silver, (greatest conductivity).....	558.0	2,580.0 to 2,670.0
	655.0	2,860.0 to 2,920.0

1/ Authorities: National Bureau of Standards, Federal Housing Administration, and university and research laboratories.

2/ Conductivity in British thermal units per inch per square foot per hour per degree Fahrenheit.

Light weight, low thermal conductivity, and ease of installation are the three prime factors which determine the selection of an insulation material. And in these three vital specifications, ZONOLITE (*Expanded Vermiculite*) stands head and shoulders above the crowd.

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Apply REZ with brush, saturated cloth, spray or dip treatment... get positive, low-cost protection against wood's two enemies, Moisture and Decay. Paint, hardware, and lumber dealers can supply REZ... or write your nearest Laucks office for full information.



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REZITING - Industrial Wood Treatment

FREE to manufacturers of sash, doors, plywood, and other wood products... a descriptive brochure of Laucks complete series of low-cost wood treatments for plant application... among them water-repellent, toxic preservatives that meet requirements of National Door Manufacturers Association and Western Pine Association. Write today to your nearest Laucks office.

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● No single type of convector can adequately meet the varying needs of several heating systems.

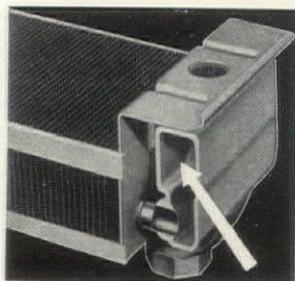
Modine was one of the first to manufacture a special convector for hot water. In 1939 Modine developed the Quiet-Seal Convec-

tor—the successful, modernized equipment for 1-pipe steam.

And *now*—to meet your specific needs—Modine has made another engineering advancement—4 *distinct types of copper convectors*, each *tailor-made* for a separate system.

FOR HOT WATER SYSTEMS

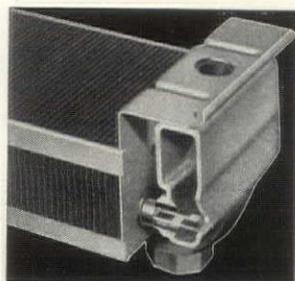
Two Soundly Designed, Accurately Rated Heating Units



Built-In Air Chamber is indicated by arrow

Hifla ... for 1-pipe and gravity systems

Large $\frac{5}{8}$ inch O. D. tubes, free of internal ferrules and other restrictions, lower frictional resistance and induce high rate of water-flow. Built-in air chamber eliminates need for accessory air storage equipment.



Turbofla...for 2-pipe forced systems

A turbulator in each tube breaks up film of cooled water on inside surface of tube; keeps hot water in constant contact with tube. Turbulator design is such that it

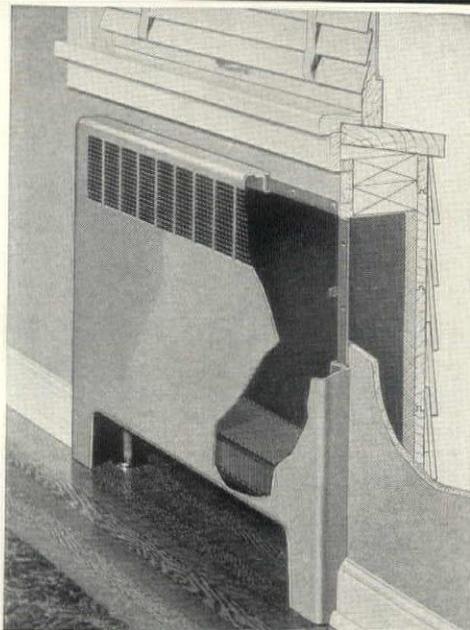
will not trap air in the tubes (which causes air binding with resultant loss in capacity). Also is equipped with the built-in air chamber.

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STANDARD—for Vapor and Vacuum Steam—proved in thousands of installations. Has the metallic bonding of tubes to fins and heavy steel corner strips distinguishing all Modine heating units.

QUIET-SEAL—for 1-Pipe Steam *exclusively*. Gives all economies without “troubles” of older systems. Built-In Water Seal permits free venting, prevents air binding or water logging. Operates on one-way flow principle.



Projection Style Recessed Enclosure. Fronts may project $2\frac{1}{4}$, $4\frac{1}{8}$, or 6 inches forward of plaster line. Heating units up to $9\frac{1}{4}$ inches deep may be installed in 4-inch stud wall.

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New Heating Unit Support Built Into Every Enclosure Cuts Installation Labor Costs

Heating Unit Shipped in Enclosure ... Ready for Piping

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BOOKS

(Continued from page 44)

of the borough and to parallel researches into the effects of bombs and the necessary structural measures to counteract them. As a result of their studies, the architects were commissioned to prepare a scheme of protection for the entire population of the borough. Their designs were later exhibited in London and were finally incorporated in this book. While it consists of a series of recommendations for

a specific set of problems, these problems are in essence no different from those faced by any large city, nor is the theoretical background any different. The book has a number of excellent drawings by Gordon Cullen, one of which is reproduced on the first page of this section. A model of the multi-story shelter, suitable for peacetime use as a garage or warehouse, is also shown.

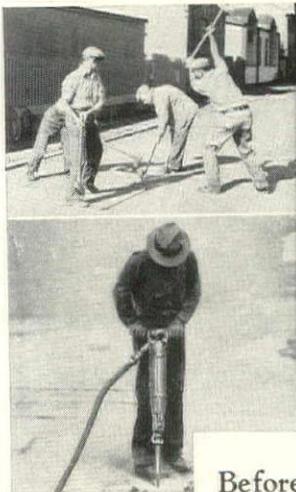
"Air Raid Defense" was written by a German chemist, a leading authority on chemical warfare. At present a refugee in this country, Dr. Wachtel has worked in England, France and the Soviet Union, and he has a remarkable background of

experience. While brief, his book discusses air raid defense in all important aspects. It summarizes European opinions, and covers protection against gas and incendiaries, giving instruction on the structural and medical precautions to be taken. An introductory chapter deals with the Nazi theories of totalitarian war. It is unlikely that anyone who reads this will remain convinced that the rest of the book is unnecessary.

Unlike the material discussed above, "Civil Air Defense" and "Air Raid Precautions" are complete manuals, with minutely detailed information given on every phase of the subject. Lt.-Col. Prentiss is a member of the General Staff Corps of the U. S. Army and is the author of the standard American work on chemical warfare. His book will probably become another standard work, for it takes experience abroad and evaluates it in terms of American conditions, and it is lucidly written and leaves nothing to the imagination. Similar in its completeness is the second book, compiled in England by a number of British experts. Divided into ten sections, it covers rescue parties and clearance of debris, organization of decontamination services, organization of air raid wardens' service, structural defense, communications, training for raid defense, gas detection, protection of windows, and care of equipment.

It would be unfair to both of these books, similar as they are in a number of respects, to say that one was more useful than the other. The English book was compiled as a series of instructions to men and women working under fire, and it even itemizes the smallest details of equipment used for their defense activities. The study of Lt.-Col. Prentiss, on the other hand, is arranged as a textbook, with all the advantages that a continuous discussion of this type offers. Taken together the books supplement each other admirably. To the American architect interested in A.R.P. they offer a complete and authoritative background.

THE AMERICAN PUBLIC LIBRARY BUILDING, by Joseph L. Wheeler and Alfred Morton Githens. Charles Scribner's Sons, New York. 844 pp., 8½ x 11. \$4.00. This is one of the few books devoted to a specific building type (outside of houses) that has appeared since the Twenties. It is a very painstaking job, covering 157 buildings. It deals with the principles of library planning, development of the program, the various elements and their relationships, special cases, structure and equipment. A section is devoted to the analysis of recent plans. If the material is not always as stimulating as might be desired, the fault is not that of the authors but with those responsible for the buildings. The best available examples were obviously selected, and the cooperation of a large number of librarians gives authority to the statements.



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EVERY CONDITION MET!

Look at point #1. Not just one or two kinds of tys. But over 60 different patent protected pre-fabricated form-tys made specifically for every form-tying condition you'll ever meet.

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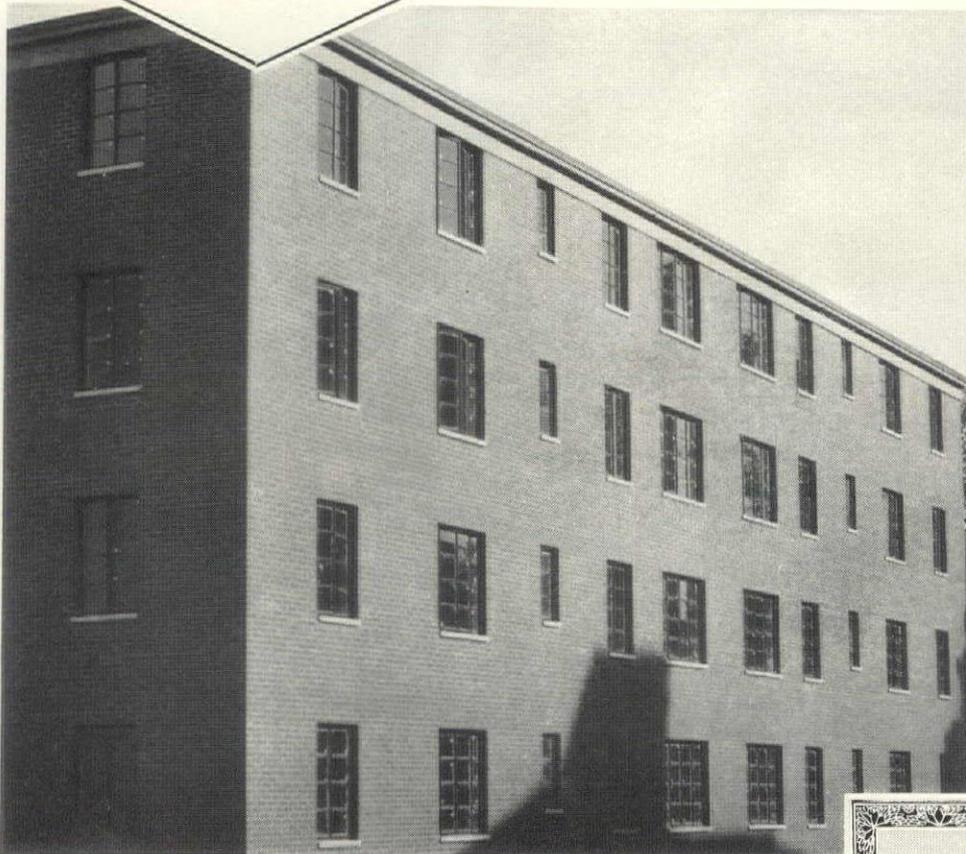
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other better Gold Bond products—including wallboard, plaster, wall paint, lime, sheathing, gypsum and metal lath, insulation and sound control materials. 21 model plants keep 10,000 dependable Gold Bond dealers supplied with fresh materials. 300 trained Gold Bond representatives are ready and able to help you select the best material for your particular job. And when you specify Gold Bond exclusively, you get the extra protection of having responsibility for *all* products centered with *one* organization, the world's largest exclusive wall and ceiling material manufacturer.

FREE DON GRAF SPECIFICATIONS, with complete architectural drawings of the Gold Bond 2" Solid Partition System, now in preparation. Write for yours today. Metal Products Division, National Gypsum Company, Buffalo, New York.



NO PREFABRICATED UNITS NECESSARY.
The exclusive new metal base of the Gold Bond 2" Solid Partition System can be quickly cut and bent on the job. Plastering goes faster—and the finished job is more satisfactory.

BELLEVUE SQUARE COURT, HARTFORD, CONN. . . ONE OF THE LARGE HOUSING PROJECTS USING GOLD BOND 2" SOLID PARTITION SYSTEMS. OTHERS ARE:

RAMONA HOUSES
Los Angeles, Calif.

GILMORE HOMES
Baltimore, Md.

HALIFAX COURT
Raleigh, N. C.

RED HOOK HOUSES
New York City

CHAD BROWN HOUSES
Providence, R. I.

RIVERVIEW COURT
Phenix City, Ala.

FELIX FULD COURT
Newark, N. J.

BRENTWOOD HOMES
Jacksonville, Fla.

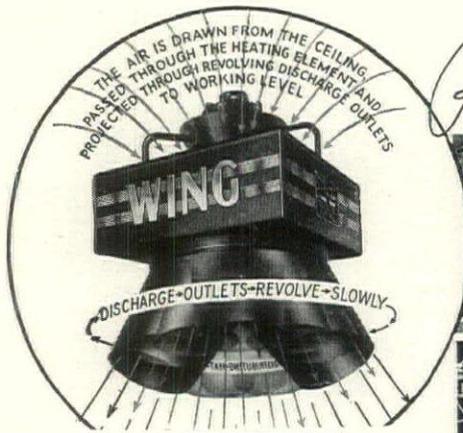
TINDALL HEIGHTS ADDITION
Macon, Georgia

BUILD BETTER WITH
Gold Bond
Everything—for walls & ceilings

Producing units at:

NEW YORK, N. Y. . . CLARENCE CENTER, N. Y. . . AKRON, N. Y. . . PORTSMOUTH, N. H. . . NATIONAL CITY, MICH. . . FORT DODGE, IA.
MEDICINE LODGE, KAN. . . ROTAN, TEX. . . SAVANNAH, GA. . . LUCKEY, O. . . BELLEFONTE, PA. . . YORK, PA. . . ORANDA, VA.
SALTVILLE, VA. . . NILES, O. . . MOBILE, ALA. . . NEWBURGH, N. Y. . . ALEXANDRIA, IND. . . DUBUQUE, IA. . . DOVER, N. J.

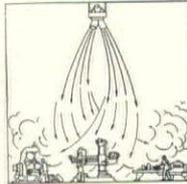
A New, Logical Method of Heating Industrial Buildings that is setting New Standards of Comfort in Working Conditions.



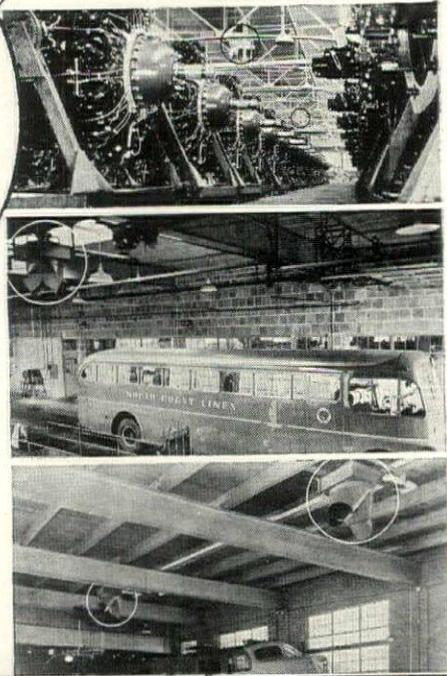
Revolving **HEAT DISTRIBUTION**

The gentle air motion created by the constantly changing direction of a WING Revolving Unit Heater brings a sensation of fresh, live, invigorating warmth to workmen, increasing their sense of comfort and promoting health and efficiency.

A prominent architect says: "WING Revolving Unit Heaters would be worth installing if they cost *twice as much!*" But they don't! In most cases they cost less. A new, complete catalog, Bulletin HR-1 is available.



The area covered by a WING Revolving Unit Heater is slowly swept by the heated air discharged by the outlets which move through 360° successively in every direction.



L. J. WING MFG. CO., 157 West 14th St., New York, N. Y.

WING *Revolving* UNIT HEATERS

This New Kind of Cabinetry is SO MUCH MORE FLEXIBLE

COMPOSITE CONSTRUCTION

- ★ Wood Where Wood is Best
- ★ Metal Where Metal is Best
- ★ Plus Newest Composition Materials



THE greater flexibility of Kitchen Maid Cabinetry ideally fits it to modern requirements. There are more standard units available, in more sizes... constructed of materials that make them easier to arrange, locate and install. This usually results in better kitchens at lower cost. Write for facts.



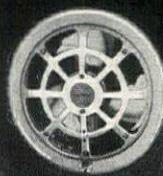
The Kitchen Maid Corp., 610 Snowden Street, Andrews, Indiana. Send new catalog and details on Standard Unit Kitchen Cabinetry.

Name _____

Address _____

- Architect
 Builder

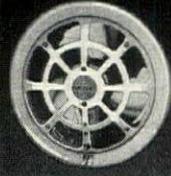
- Dealer
 Owner



KITCHEN



BATH



RATHSKELLAR

3 ROOMS
where **VICTOR In-Bilts**
contribute to Modern Living:

1. **IN THE KITCHEN** to speedily clear out greasy fumes and cooking odors. Keeps the room fresh and clean.
2. **IN THE BATHROOM** to dispel steam, heat, moisture and odor. Provides automatic ventilation.
3. **IN THE RATHSKELLAR** to carry out smoke, clarify the air, assuring all-time comfort.

The cost of assuring modern comfort in these three important rooms is so small when amortized with the total home cost—that no modern home can afford to be without Victor In-Bilt Ventilators. Put Victor In-Bilts in your plans. Write for details. Address Dept. IB-120.

VICTOR ELECTRIC PRODUCTS Inc.
2950 Robertson Ave., Oakley, Cincinnati, O.

Why Take LESS Than ALL that Rō-Way GIVES?

Rō-Way Gives
"Crow's Foot"
Outer Bearing Support
Rigidly holds the chain sheave wheel in permanent alignment. No twist . . . no sag to cause friction.

Rō-Way Gives
"Ro-To Live" Spring
A powerful Floating Torsion Spring (used on some models), gives perfect balanced lifting power, and ends side-drift and binding.

Rō-Way Gives
"Zip-Lock" Adjustment
Used on Ro-Way Doors having Twin Torsion Spring Power. Permits instant easy adjustment of spring tension.

Rō-Way Gives
"Tailor Made" Springs
Each spring is individually made for the Ro-Way Door on which it is used. Each is power-metered to the weight of the door.

Rō-Way Gives
Parkerized and Painted Hardware
Ro-Way Hardware and Tracks are given this well known protection against rust and corrosion.

**Rō-Way
OVERHEAD TYPE
DOORS**

Especially since there is no extra cost to your clients When you are specifying Doors for Residential, Industrial or Commercial use, be sure to see what Ro-Way offers. Do this for two reasons . . .

- 1st. These modern Doors of the Overhead Type offer surprising advances in design and mechanical improvements.
- 2nd. It's "3 to 1" that Ro-Way will save your clients money . . .
 - by giving them added values without any increase in cost.
 - by making possible a lower installation cost, or
 - by meeting their requirements with a less expensive model of door than they have been considering.

So, by all means, see what Ro-Way offers and give your clients all that only Ro-Way gives.

NATIONWIDE SERVICE

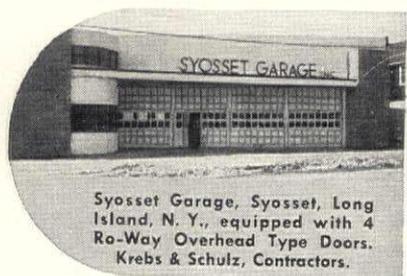
Ro-Way Distributors are located in principal cities and provide competent installation engineers to assure prompt service and the satisfactory operation of any Ro-Way Door you specify for Residential, Commercial or Industrial use.

Write for 72-page "Time-saving Specification Book". Shows detailed drawings of every Ro-Way Model. Please attach your Professional Card or Business Letterhead to your request.

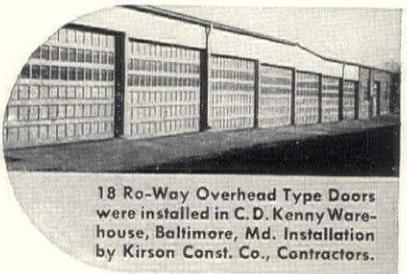
ROWE MANUFACTURING CO.
935 Holton Street Galesburg, Ill.



Attached Residence Garage with Ro-Way Door.



Syosset Garage, Syosset, Long Island, N. Y., equipped with 4 Ro-Way Overhead Type Doors. Krebs & Schulz, Contractors.



18 Ro-Way Overhead Type Doors were installed in C. D. Kenny Warehouse, Baltimore, Md. Installation by Kirson Const. Co., Contractors.

ROWE MANUFACTURING CO.,
935 Holton St., Galesburg, Ill.

Gentlemen: Please send me Free copy of your 72-page "Time-saving Specification Book" for Architects, as advertised in Architectural Forum.

Name.....
Address.....
City..... State.....

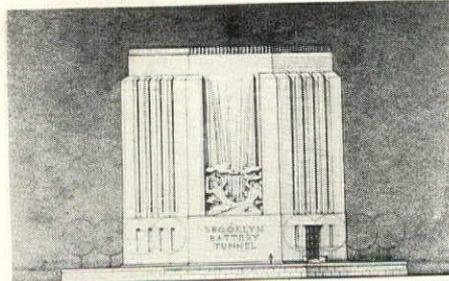
There's a RoWay for every Door way!

FORUM OF EVENTS

(Continued from page 38)

VENTILATING TOWER COMPETITION

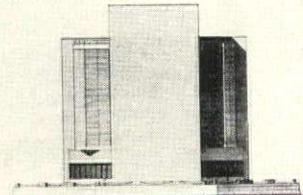
Last month the New York City Tunnel Authority announced the winners of its competition for the design of the exterior of the mid-river ventilating tower for the Brooklyn-Battery tunnel. Limited to the Mayor's list (about 200 firms), the competition offered three prizes of \$2,000, \$1,000 and \$750, and drew 57 entries. The problem was one of exterior design only, drawings of plans and sections being given competitors. By the terms of the program, the owner has the right to use the winning



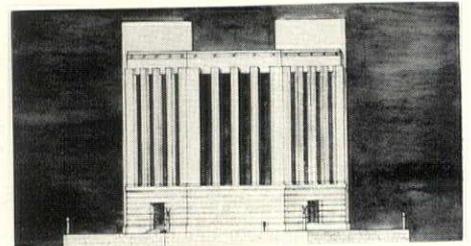
FIRST PRIZE: MCKIM, MEAD & WHITE

design, modify it, or reject it in favor of the one already prepared by the Authority. Premiated solutions, all of which are shown here, present the standard treatments: vertical, horizontal and the grid pattern. On McKim, Mead & White's solution the Jury remarked that it liked "the simple octagonal shape," the "deep re-

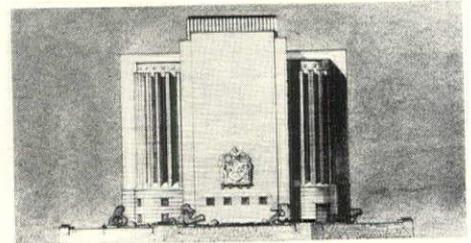
veals," and seemed especially pleased by the fact that "the building does not cry out with the suggestion that it is merely for the removal of bad air." *Savastano Photos*



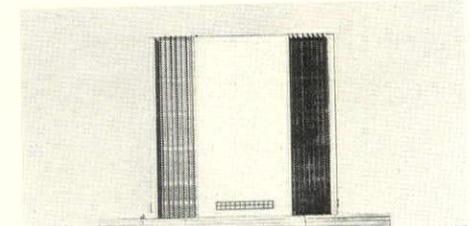
SECOND PRIZE: ARCHIBALD M. BROWN



THIRD PRIZE: CLINTON & RUSSELL



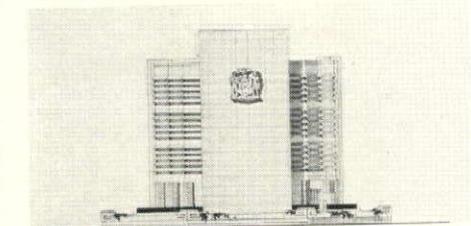
MENTION: BLOCH & HESSE



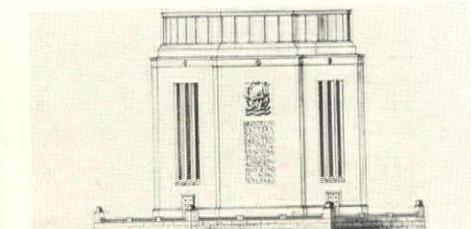
MENTION: WILLIAM J. CREIGHTON



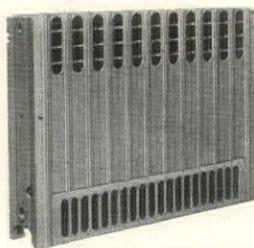
MENTION: GITHENS & KEALLY



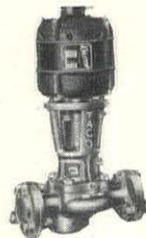
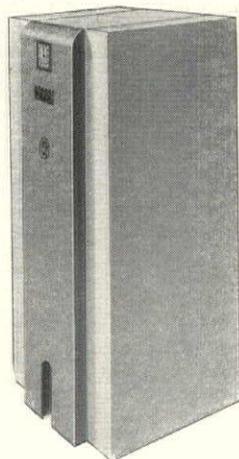
MENTION: McCAFFERY & GAUTHIER



MENTION: ELDRIDGE SNYDER
(Continued on page 106)



The new cabinet Burnham Radiant Radiator has valve and mesh out of the way. Ideal for recessing. Gives both radiant and convected heat.



The circulator is noiseless.

The boiler is compact. Heats both the house and hot water supply.

"Cold 70" IN HEATING

A Simple Low Cost Way To Overcome It

NO, you are wrong. We don't mean it's done by using costly "compensating thermostats." It's done by a *coasting* heat, that is not *COSTING* while it's coasting.

The New Burnham one-pipe circulated hot water is the answer.

"But," you say —

Hold on a minute, won't you please, until we state what this Burnham *coasting* heat is. The aquastat keeps at all times, the water in the boiler at say 160 or 180 degrees. The thermostat calls for the heat. It does not turn on the fire. It starts the circulator.

When the thermostat is satisfied, off goes the circulator.

But on stays the heat, coasting along, preventing that all-on or all-off effect, so definitely so with warm air. That so-called "latent" heat, in the hot water in the radiators, keeps right on giving off its heat, long after the circulator stops. There is no sudden drop.

"Cold 70" with its creepy period is largely overcome.

The heat is not all-on; or all-off.

Send for facts in full detail of this Burnham Coasting *No-Costing* Heat.

See Sweet's. See for yourself.

Burnham Boiler Corporation

Irvington, N. Y.—Dept. J Zanesville, Ohio—Dept. J
Representatives in all Principal Cities
of the United States and Canada

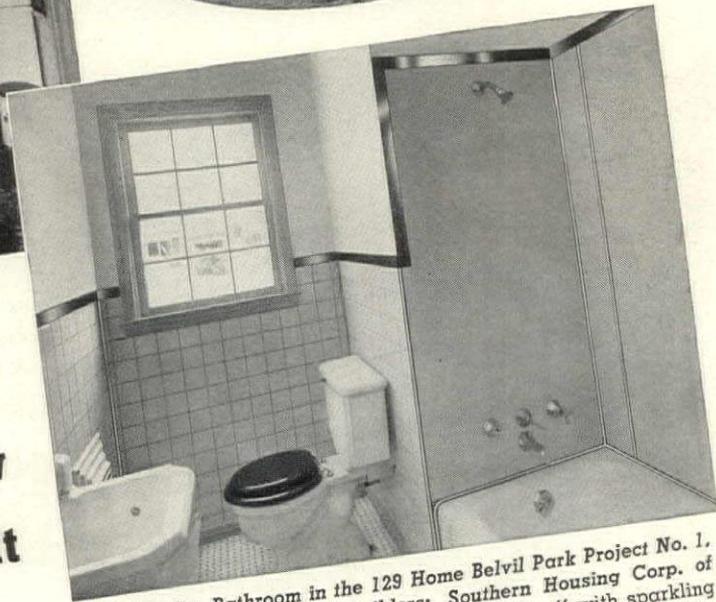
Extra Livability—Beauty—Convenience for DEFENSE HOUSING with Marlite Pre-Finished Wall Paneling



One of the 408 Marlite Kitchens and Bathrooms in Enlisted Men's Quarters, Great Lakes Naval Air Training Station. A colorful Marlite Tile-Pattern for walls around work area assures easy cleaning, sanitation, low upkeep, and lends a lively touch of color to this kitchen.



2 Examples of How Marlite Provides It



Marlite Bathroom in the 129 Home Belvil Park Project No. 1, St. Albans, W. Va. Builders: Southern Housing Corp. of W. Va. Eggshell Marlite Plain-Colors set off with sparkling Stainless Steel Mouldings lend a touch of luxury usually considered beyond defense housing budgets. Marlite Tile-Patterns were used in the kitchens.

● By using Marlite generously in kitchens and bathrooms in low cost defense housing, resourceful architects and builders are providing the kind of livability, beauty and appeal you usually find only in homes costing \$7,000 and more. Marlite walls provide sound, low cost protection against obsolescence. Years from now they'll still be smart and modern . . . attractive to owners and buyers alike. Marlite pre-finished wall paneling is:

EASY TO INSTALL. Carpenters quickly cut easy-to-handle Marlite panels to size and apply.

ECONOMICAL. Low in first cost. No periodic refinishing.

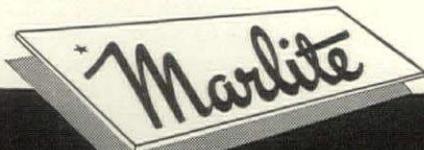
EASY TO CLEAN. Glass-smooth surface offers no "grip" for dirt . . . may be cleaned with a damp cloth.

PRE-FINISHED at the factory. No painting on the job.

OVER 100 COLORS AND PATTERNS to choose from.

Ask your Marlite Representative for suggestions on how to utilize Marlite in low cost housing. Write us. Or see Sweet's Catalog 11/39.

MARSH WALL PRODUCTS, INC., 101 Marsh Place, Dover, Ohio



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

Pre-finished WALL PANELS

FOR CREATING BEAUTIFUL INTERIORS

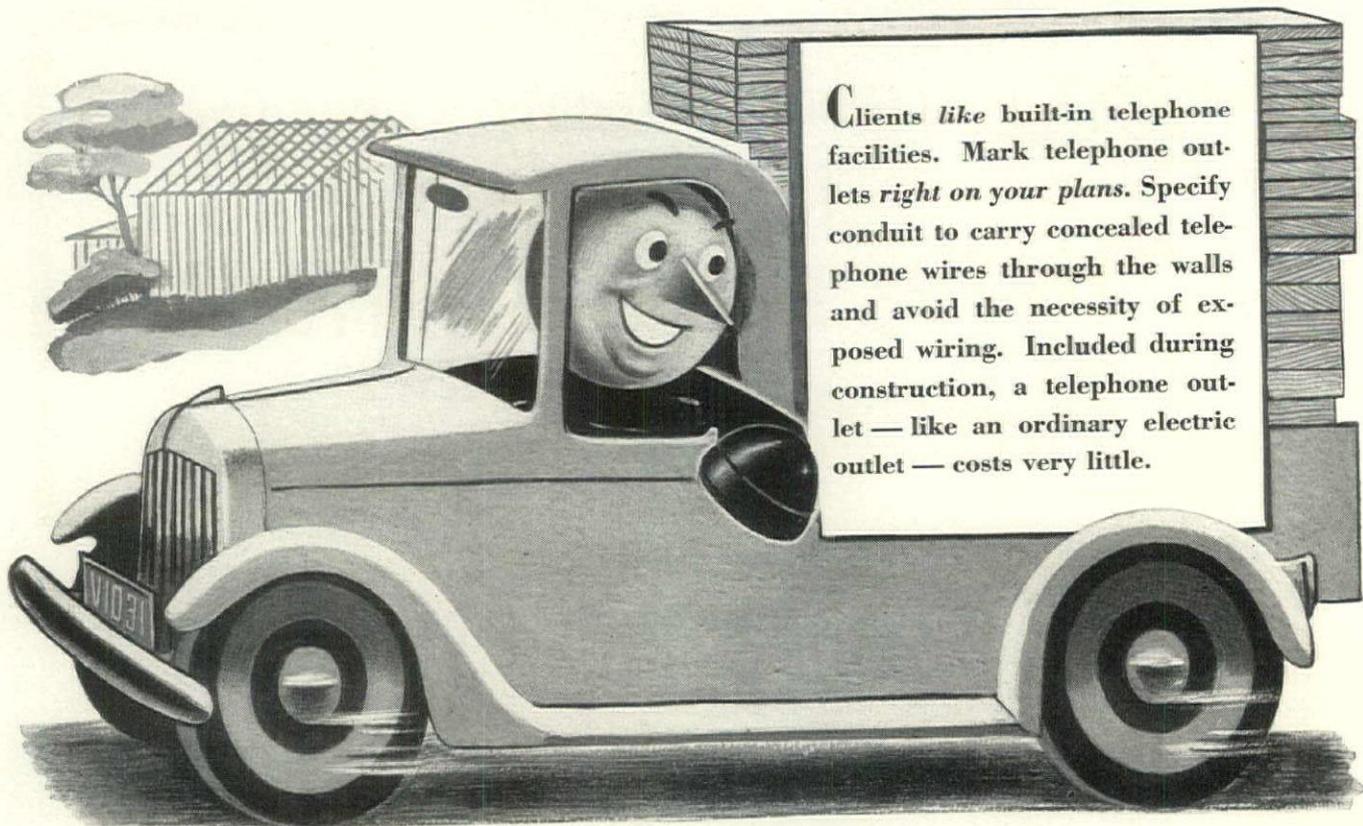
PLAIN-COLORS HORIZONTALINE WOOD-VENEERS • • HEATEX • •
TILE-PATTERNS MARBLE-PATTERNS • CARSTENITE • MARSH MOULDINGS

MARSH WALL PRODUCTS, INC., 101 Marsh Place, Dover, O.
Please send complete information on Marlite
DE LUXE Marlite VELVETEX.

Name

Firm

City State



Clients like built-in telephone facilities. Mark telephone outlets right on your plans. Specify conduit to carry concealed telephone wires through the walls and avoid the necessity of exposed wiring. Included during construction, a telephone outlet — like an ordinary electric outlet — costs very little.

• Your local telephone company's "Architects' and Builders' Service" is glad to help in planning efficient, economical telephone arrangements. Call your nearest Bell Telephone Business Office and get acquainted with this time-saving service.



Every Architect SHOULD
HAVE A COPY OF THIS BOOK

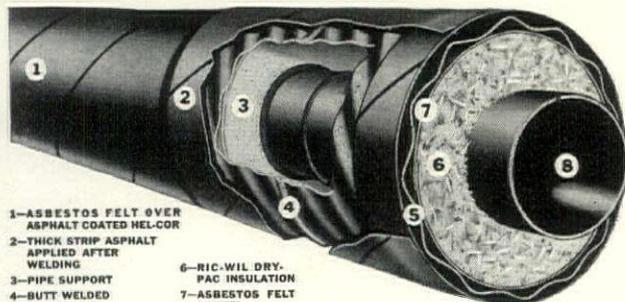
Stewart Non-Climbable Chain Link Wire Fence and Entrance Gates offer maximum protection to industrial property. "ALL BEAM" construction (solid open section line and terminal posts as well as top rail) exclusive with Stewart, is the heaviest and strongest manufacturing and is superior to pipe or a combination of pipe and beam. Stewart Industrial Fence assures lifetime, unfailing protection. Catalog No. 79 is profusely illustrated with Chain Link Wire installations and covers complete details on structural superiorities. A copy will be sent on request. If interested in Iron Fence, ask for Catalog No. 76. And, for those interested in Ornamental Iron and its adaptation to architecture and landscaping "Book of Designs D" is available. When writing, please mention catalogs desired.

"Fence Builders to America Since 1886"

THE STEWART
IRON WORKS CO., INC.
865 Stewart Block
Cincinnati, Ohio



RIC-WIL



- 1-ASBESTOS FELT OVER ASPHALT COATED HEL-COR
- 2-THICK STRIP ASPHALT APPLIED AFTER WELDING
- 3-PIPE SUPPORT
- 4-BUTT WELDED CONNECTION
- 5-AIR SPACE
- 6-RIC-WIL DRY-PAC INSULATION
- 7-ASBESTOS FELT JACKET
- 8-STEAM PIPE

INSULATED PIPE UNITS

For the underground distribution of steam, hot water, or oil, use these modern, thoroughly engineered, factory built, pre-sealed units which are shipped complete as shown, in 20 ft. lengths or as required. High thermal efficiency, long life, low installation cost. Insulation any type preferred. Total prefabrication means important savings in time and labor on the job. Easy to specify, easy to buy. Ric-wil is equipped for prompt delivery. Latest Bulletins on request.

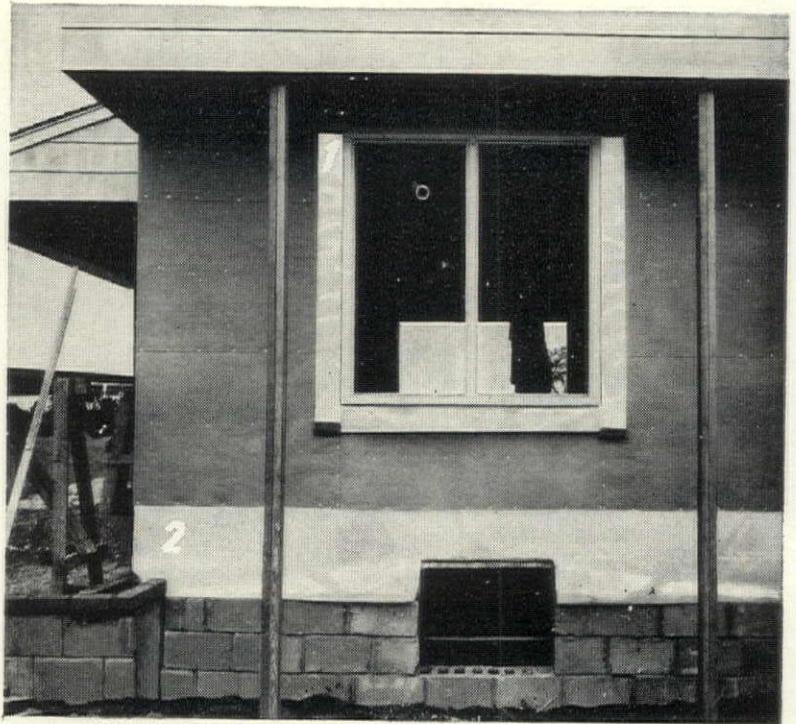
THE RIC-WIL COMPANY
CLEVELAND, OHIO • AGENTS IN PRINCIPAL CITIES

3 WAYS TO MAKE A "HOUSE" A BETTER "HOME"

*with Anaconda
Electro-Sheet Copper!*

1 CONCEALED FLASHING AROUND WINDOWS & DOORS

Thin, for low cost, easy application, yet strong and durable for complete protection against infiltration of air and moisture. That's part of the story of Anaconda "Electro-Sheet" Copper, used here as concealed flashing around window frames. It is absolutely rustproof and will not dry rot regardless of time. With a suitable backing bonded to it, "Electro-Sheet" comes in long rolls of varying widths—is extremely flexible and easy to handle.



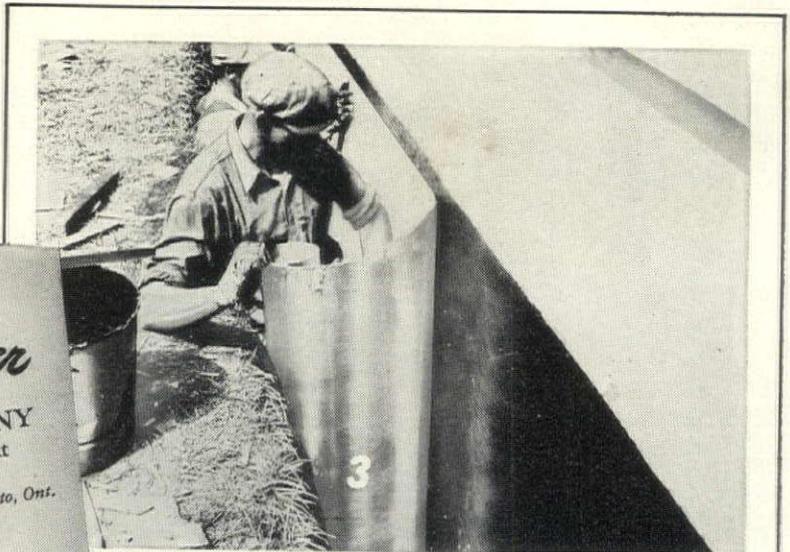
The house shown here is in Central Islip, New York. The architect was Eugene Marten; the contractor, Harold McGowan. This "Electro-Sheet" is Copper-Armored Sisalkraft—made by The Sisalkraft Co., 205 West Wacker Drive, Chicago.

2 DAMPCOURSE AND APRON BEHIND BRICK VENEER

Adequate protection against moisture is always to be sought at this vulnerable point. Proof that Anaconda "Electro-Sheet" Copper provides just such protection is found in recent tests made on sheathing papers. Results showed that metallic products, including four "Electro-Sheet" types, were the only materials impervious to water and water vapor both before and after accelerated aging.

3 DAMP-PROOFING FOR FOUNDATION WALL

Here "Electro-Sheet" provides a low-cost "metallic" answer to a common water-proofing problem. The photo shows how easily "Electro-Sheet", when suitably backed, can be handled. It's easy to install because it is almost as flexible as paper, yet highly resistant to kinking, breaking or tearing.



R. E. Anderson was the architect for this work in Wayne, Illinois. Herman Wendler was the contractor. This "Electro-Sheet" product is also Copper-Armored Sisalkraft.



FORUM OF EVENTS

(Continued from page 102)

AWARDS

A \$1,000 scholarship for postgraduate work in the field of architecture and civic design has been awarded to Ann Sirotenko, West Orange, N. J., by the Advisory Council of the COOPER UNION ART SCHOOLS. The first girl ever to receive a postgraduate architectural scholarship at Cooper Union, Miss Sirotenko will use it for a

year of advanced study at the Cranbrook Academy of Art.

COMPETITIONS

The AMERICAN ACADEMY IN ROME, unable to send its Fellows to Rome for study and travel, has decided to offer competitive cash prizes in the several fine arts. In the fields of Architecture and Landscape Architecture, competitions will be held for first prizes of \$1000 and second, third and fourth prizes of \$100, \$50 and \$25 respectively. Applications for the competitions, open to unmarried male citizens of the United States under thirty-one years of age, must be filed by February 1, 1942.

Further information and entry blanks may be obtained from the Executive Secretary of the Academy, 101 Park Avenue, New York City.

Applications for the Arnold W. Brunner Scholarships for 1942 will be received at the ARCHITECTURAL LEAGUE, 115 West 40th St., New York City, until October 15, 1941. All members of the League, in good standing at that date, are eligible for the scholarships. Awards are to be made for the purpose of "promoting and encouraging accomplishment in the arts and professions represented in the membership of The Architectural League of New York and to render such arts and professions of greater use to the community."

The AMERICAN INSTITUTE OF STEEL CONSTRUCTION announces its Annual Bridge Design Competition, open to students of structural engineering and architecture in recognized technical schools of the United States and its possessions. Further information may be obtained from F. H. Frankland, at the offices of the Institute, 101 Park Avenue, New York City.

The LITURGICAL ARTS SOCIETY, 300 Madison Avenue, New York City, has been commissioned by the National Catholic Welfare Conference to conduct a competition for a statue to be erected in front of the new headquarters of the Conference in Washington, D. C. Eligibility for the competition will be determined by submission of qualifications to the Society not later than November 7, 1941.

EDUCATION

CRANBROOK ACADEMY OF ART has announced the appointment of Walter Baermann as head of its new department of Industrial Design. Mr. Baermann was the founder and director, until this summer, of the California Graduate School of De-

STOPS DRAFTS AND LEAKS—CUTS FUEL BILLS



Women's Residence Hall, Depauw University, Greencastle, Ind. Designed and built by R. E. Schenck, Greencastle, Ind. Calked with Pecora by McFerran-Kane Company, Indianapolis, Ind.

SCHOOLS AND DORMITORIES NEED PECORA WEATHER PROTECTION

Better scholastic work can be accomplished if students are protected from drafts and dampness. Longer building life, lower repair charges, smaller fuel bills, can be anticipated when moisture and dirt seepage through joints is prevented. Pecora Calking Compound has been specified and used in thousands of

educational buildings since its introduction in 1908, because responsible architects and builders have realized the importance of sealing all exposed joints against weather. Experience has proved that Pecora is the ideal material for this purpose, for when properly applied, it will not crack, chip or dry out.

Pecora invites your specification and requests for details

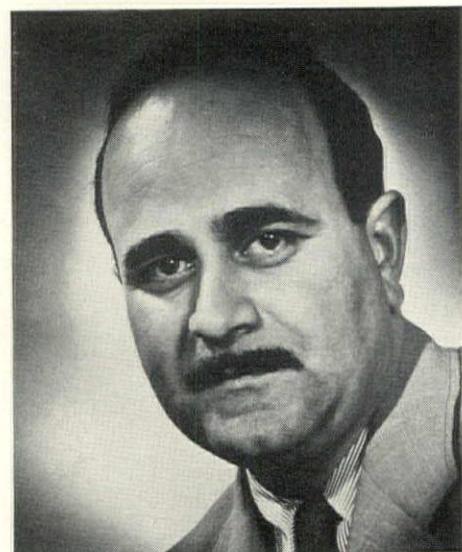
PECORA PAINT COMPANY, INC. 4TH & VENANGO STREETS PHILADELPHIA, PA.
MEMBER OF PRODUCERS' COUNCIL, INC. ESTABLISHED 1862 BY SMITH BOWEN

Junior High School Bldg., Galveston, Texas. Ben Milam, Archt. Knutson Const. Co., Houston, Texas. Genl. Contrs. Calked with Pecora by A. M. Bowles, Inc. Houston, Texas.



PECORA CALKING COMPOUND

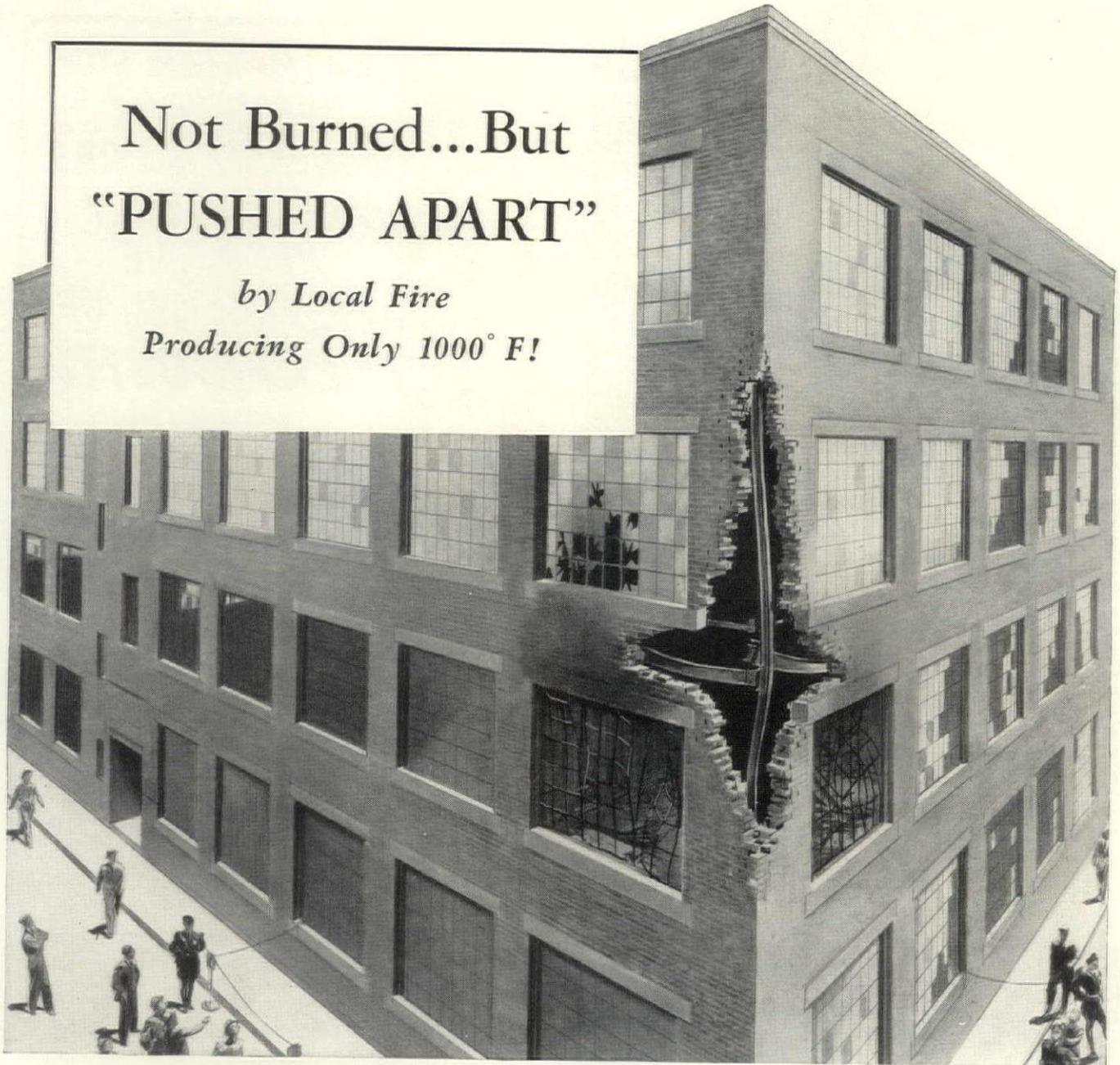
ALSO MORTAR STAINS • SASH PUTTIES • ROOF COATING • PECOMASTICS



sign at Pasadena. Born in Germany and since 1928 a resident of this country.
(Continued on page 110)

Not Burned...But "PUSHED APART"

by Local Fire
Producing Only 1000° F!



ANYONE who confuses a *non-combustible* with a truly *fireproof* building needs only to see what havoc can result from a localized fire in a so-called *non-combustible* building. Small fires that raise temperature to only 1000° F. may cause 9½ inch expansion in a 100-ft. steel truss . . . enough to wreck brick walls or dangerously distort columns. Even at 900° F., some steel columns may be seriously impaired in load-bearing ability!

Take the simple modern way to make *your* buildings *fireproof* instead of merely *non-combustible*. Build Grinnell Automatic Sprinkler Fire Protection into structural design . . . provide positive protection that stops fire at its source!

There's a staff of Grinnell engineers near you to help make

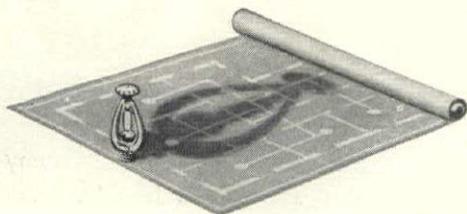
this efficient fire protection a blended part of your building. With vital facts compiled through Grinnell's 60 years' experience . . . with every type of system at their disposal . . . these engineers know how to harmonize effective fire protection with any decorative design.

Phone for an advisory interview which involves no obligation. Grinnell Company, Inc., Executive Offices, Providence, Rhode Island. Branch offices in principal cities.

GRINNELL

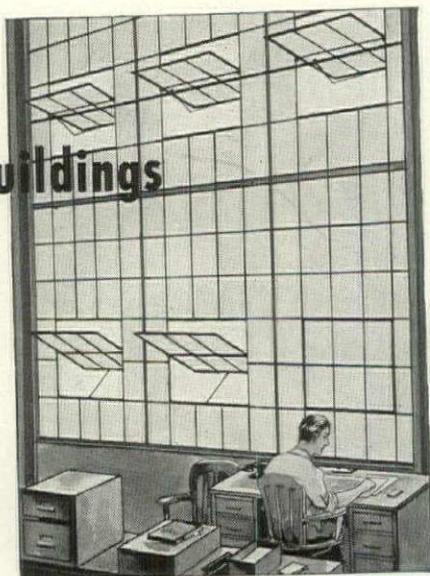
Automatic Sprinkler Fire Protection

A BLENDED PART OF YOUR BUILDING'S DESIGN



... for Defense Buildings

Lupton Steel Windows in defense buildings assure an abundance of daylight. Proper ventilation.



Nowhere is careful window planning so important as in the new multiple-windowed defense buildings. Proper daylighting, controlled ventilation are prime requisites in the battle of production.

Lupton Steel Windows and Doors meet these requirements of defense construction and, in addition, provide low cost investment in improved working conditions for normal operation after the present Emergency.

Architects on defense construction value the cooperation of Lupton engineers. Whether it is an approval drawing or a finished window, Lupton gives you dependability backed by an experience of more than thirty years in modern steel window design.

LUPTON

STEEL WINDOWS—STEEL DOORS

Michael Flynn Manufacturing Co., Allegheny Avenue
at Tulip Street, Philadelphia, Pa.



NO MATTER HOW
WELL YOUR
CONCRETE FLOORS
ARE LAID THEY
NEED THE
PROTECTION OF
LAPIDOLITH
LIQUID*

The finest concrete floor, however expertly laid, will develop a large percentage of tiny voids after setting. This decreases density of the topping and permits the particles to dust off readily under traffic and abrasion. This and other inherent reasons for dusting can be corrected on old or new concrete by applying LAPIDOLITH LIQUID.

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Write for complete details concerning "on the job" performance of LAPIDOLITH LIQUID. Also see data on LAPIDOLITH LIQUID in Sweet's Catalog, page 5/24.

LAPIDOLITH LIQUID is flushed on finished concrete. *U. S. Patent #2203302



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When you put "MIAMI Cabinet and Accessories" in your specifications, you can feel pretty certain they will go in the building. For everybody who may have any "say" in the matter knows that "MIAMI" is the identifying mark of the finest bathroom cabinets built.

MIAMI Cabinet Ensembles incorporate the highest quality plate glass mirrors—frames of polished chrome—the artistry of modern lighting . . . provide extra recessed shelves for towels—space for

Bathroom by Standard Sanitary
Cabinet is The Duchess with storage space concealed behind circular mirror; below is mirror-lined, recess shelf No. 904; on each side is mirror-lined, recess shelf unit No. 900; at lower right is electric heater unit No. 411; over bath tub is recess shelf unit No. 904.

the private supplies of individuals—advanced features that widen their usefulness and enhance their beauty.

After all, fine bathrooms *deserve* MIAMI Cabinets. They lead the world in originality. Offer a wider selection of styles—over 140 distinctive models. Specify "MIAMI" and watch everybody, including your clients, approve your judgment. See the MIAMI Catalog in Sweet's, or write for specific information to Dept. A. F.

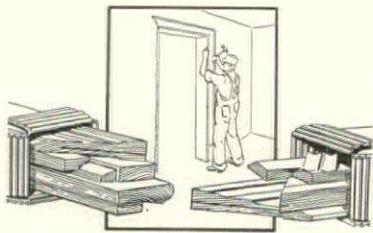
MIAMI CABINET DIVISION
THE PHILIP CAREY MFG. COMPANY
MIDDLETOWN, OHIO

Bathroom by Kohler
Cabinet is The Miami Imperial



Bathroom by Crane
Cabinet is No. 2050 with tubular light bracket No. 5; below, a No. 904 mirror-lined, recess shelf unit; at left, towel cabinet No. 510, with mirror door.





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Trimpak (packaged trim) effects an installation time saving of approximately 44%. *Time waste is eliminated.* For real speed, use patented Trimpak lock joint.

Trimpak's manufacturing methods save waste of materials. You get precision pre-cut trim—enough to do the job—no more, no less. *Material waste is eliminated.*

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TRIMPAK

"THE ULTIMATE IN TRIM"



FORUM OF EVENTS

(Continued from page 106)

he is a graduate of the University of Munich. His American experience includes work with the design organizations of Joseph Urban, Norman Bel Geddes, Henry Dreyfuss, Howe and Lescaze, as well as independent industrial design practice in New York and on the West Coast. He has also served as educational director of the Springfield Museum of Fine Arts and as consultant to the Boston and Worcester Art Museums.

In order to assist industrial designers, architects, etc. in meeting some of the problems created by the defense program, NEW YORK UNIVERSITY has scheduled a series of fifteen weekly lectures on modern metals and plastics. Speakers will include engineers and research directors from such companies as General Electric, U. S. Steel, International Nickel, Bendix Aviation and Durez Plastics and Chemicals.

PERSONALS

Announcements of change of address have been received from the following:

Frederick Morris Wells and John Carvel Merrill, architects, to 101 Park Avenue, New York City.

Clarence Ostman Peterson, architect, to 604 Mission Street, San Francisco.

Joseph L. Steele, architect, to 219 Walnut Street, Harrisburg, Pa.

William Hoskins Brown, architect, to 33 Woodland Road, Auburndale, Mass.

Arthur E. Rigolo and Stanley A. Leeks, architects, to 802 Main Avenue, Clifton, N. J.

ERRATA

The Editors regret the omission of credit to the H. H. Robertson Co. for the installation of Robertson Q-Floors in the Washington National Airport, published in the September FORUM.

On page 103 of the August FORUM, the Harnish Co. was described as architect-engineer and contractor of the Adel Precision Products Corporation plant. The designation should have read "Harnish Co., Engineers."

One page 84 of the August FORUM, the price of "Construction Estimates and Costs," published by the McGraw-Hill Book Co., was incorrectly listed. The price of the book is \$5.

DIED

COL. HORATIO B. HACKETT, 61, in Chicago. A native of Philadelphia, Col. Hackett was a graduate of the William Penn Charter School and the U. S. Military Academy. During the war, in which he served as colonel, he was awarded the Distinguished Service Medal and Purple Heart decorations. He became general manager of the Federal Public Works Emergency Housing Corp. in 1934, then director of housing, PWA, and, from 1935 to 1937, he served as assistant administrator of the PWA. He also served as a member of the President's Advisory Board on Allotments and as a member of the Executive Committee of the National Association of Housing Officials. He was a member of the American Institute of Architects and the Western Society of Engineers.

WILLIAM MITCHELL KENDALL, 85, architect, at Bar Harbor, Me. Mr. Kendall was a member of the firm of McKim, Mead & White, and the designer of the Post Office and Municipal Building in New York and the American Academy in Rome. He was a National Academician, a fellow of the American Institute of Architects, and a trustee of the American Academy in Rome.

(Continued on page 114)

Protect America's Homes for 30 YEARS PLUS*

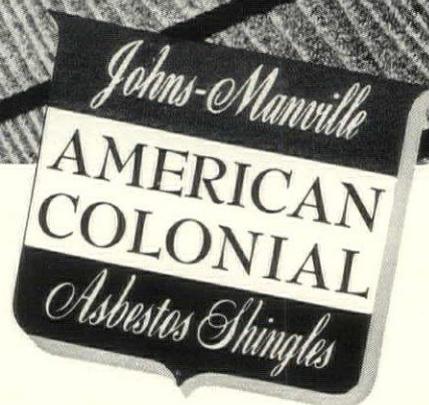
with this new, low-cost asbestos
roof shingle that is scoring
record-breaking success all
over the country—the Johns-
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have called for thousands of
squares. As a result, delivery
may be slower than during
normal times. However,
factory production is being
speeded up... every step is
being taken to assure the
fastest delivery possible un-
der the present emergency.



*This is an intentional understatement—Thou-
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30 years ago are still going strong. No sign that
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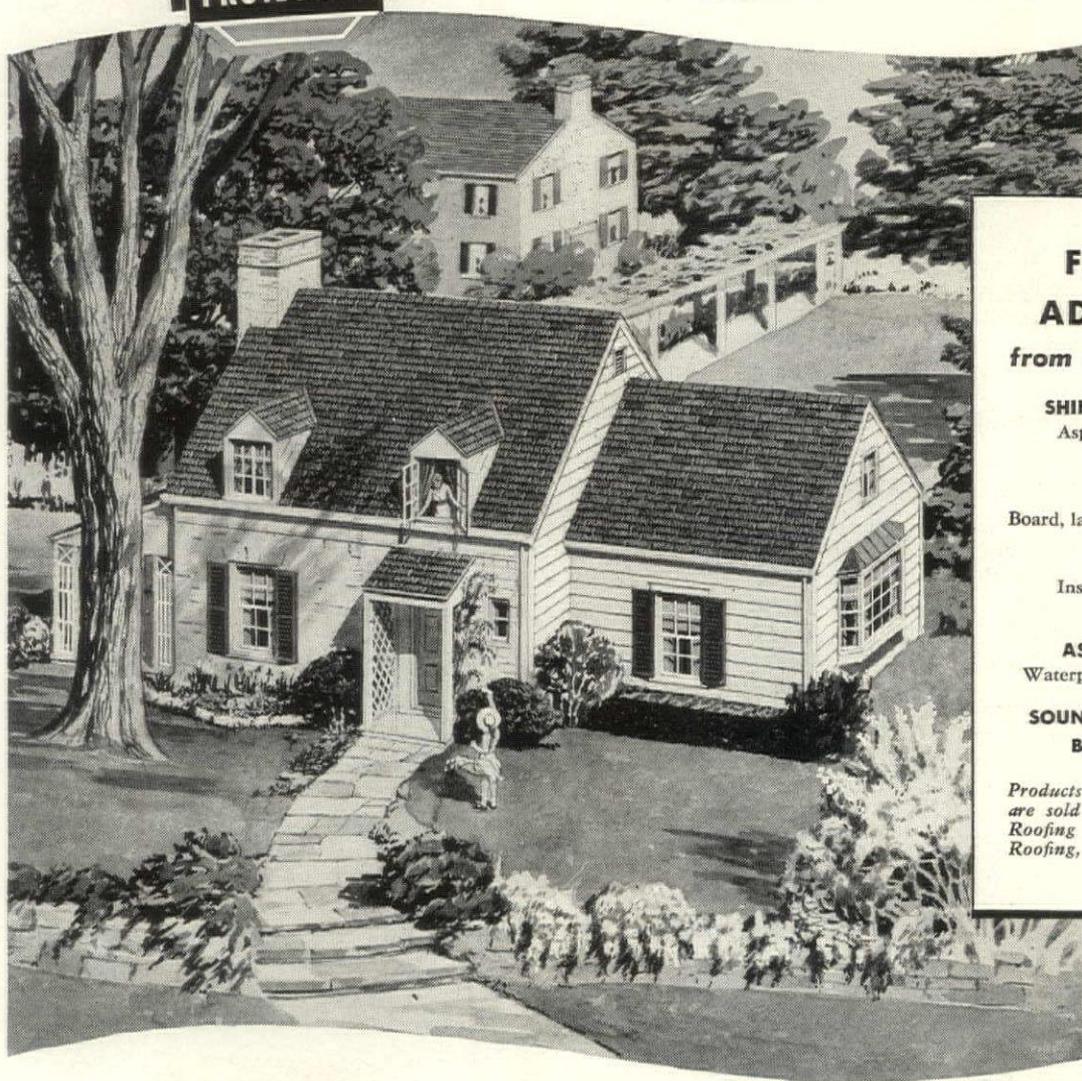
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Specifications for thousands of moderately priced homes . . . particularly in defense areas . . . call for fire-safe materials that require minimum up-keep. Designed attractively yet economically, exterior walls of this small home show Flintkote asbestos-cement sidings . . . proof against termites, rot and wear, as well as fire. The colorful, durable, long-lived roof shows Flintkote mineral surfaced asphalt shingles which rate the Class C Underwriters' label.

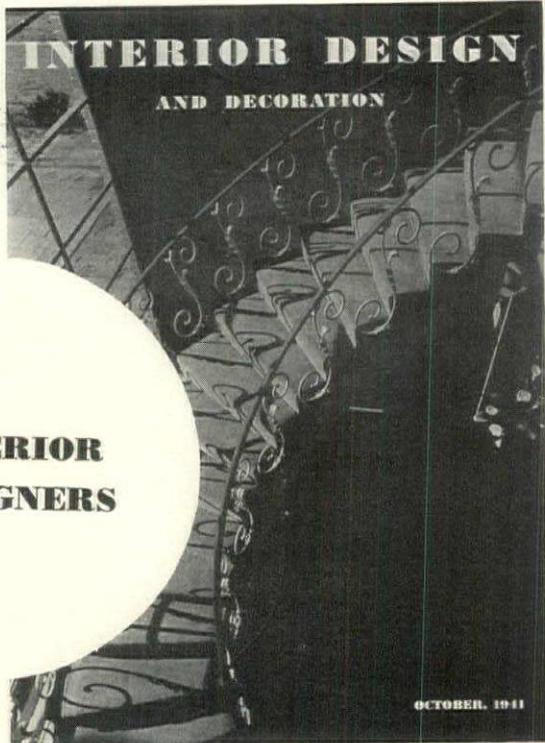
The sheathing is Flintkote insulation board . . . a fuel-saver that also carries structural loads. Flintkote insulation lath provides an ideal plaster base. Some rooms are finished with Flintkote decorative tile and plank that insulate, beautify and quiet unwelcome noise at one low cost.

Flintkote building materials please dealers, builders and architects because these time-proved products are carefully made to please and satisfy home buyers. For modernization jobs or new construction, you can depend upon Flintkote products for quality, service and sales appeal.

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Professional Magazine**

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INTERIOR DESIGN AND DECORATION, a professional journal for Interior Designers is as essential to you when you are designing an interior as your architectural journals are when you are designing and constructing a building. Within its covers each month, you are given information on the *wholesale sources* for furniture, fabrics, floor coverings, wall coverings, lighting fixtures, lamps, fireplace equipment, plastics, etc. Also a multitude of new materials necessary to complete a fine interior, whether it be an air terminal, air transport, apartment house, bank, bar, church, club, cocktail lounge, college, embassy, hotel, hospital, library, night club, office, railway terminal, restaurant, residence, school, ship, shop, store, theatre, train.

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CLASSIFICATION

ARCHITECT

INTERIOR DESIGNER

FORUM OF EVENTS

(Continued from page 110)

CHARLES I LEAVES FOR THE COUNTRY

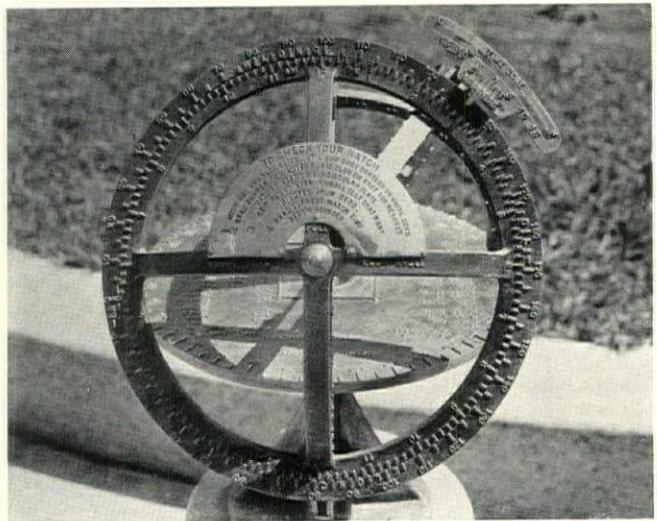
Long one of the minor tourist attractions of Trafalgar Square in London, Le Sueur's fine statue of King Charles the First has not only weathered the storms, soot and fog of centuries, but the Zeppelin raids of World War I and the more recent visits of Nazi bombers. Commemorating a monarch whose



chief claim on posterity was his bad luck in getting in the way of Oliver Cromwell, the statue was recently moved to safer quarters for the duration. Left behind was its pedestal, one of the best pieces of 17th Century stonework in the city.

SUN DIAL

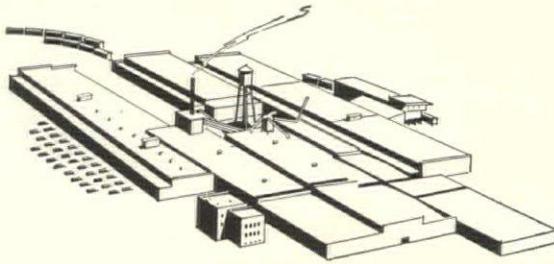
The main trouble with the sun dial, aside from its bulkiness and comparatively short working hours, is the lack of reliability due to variation in the sun's seasonal movements; in consequence this once-honored timepiece has gradually sunk



Harvey Patteson

to the level of a garden ornament, on a par with pottery vases and sculptured frogs. All this is now on the way to being changed by the Planetarium and Perfected Sun Dial invented by F. H. Hagner of San Antonio, a remarkable instrument that will give the time (on a sunny day) to within a couple of minutes of Naval Observatory time in any season. It will give not only local time but the time in any given city; it functions as a miniature planetarium; will demonstrate navigational problems, perform a variety of other operations.

(Continued on page 118)



SOME CERTAIN FACTS IN AN UNCERTAIN WORLD

A Message to the Building Industry from the Makers of Andersen Lifetime Windows

● Today the building industry is busier than any time in more than a decade. You are doing your part in the great effort our America is making to defend its principles and ideals.

We, too, are busy. Our huge productive capacity is now strained to its limit. We are booked solidly for several months to come. We anticipate that this condition will continue for some time. By the thousands, our windows are going out to build new homes for defense workers who must have dwellings near their factories and plants, and to build new structures directly involved in the defense program.

Meanwhile the tremendous demand made by the production of the actual materials of defense is creating acute shortages of certain materials, notably metals. Thus we are met on one hand with increasing demand for windows, and on the other hand with certain material shortages.

But even in this uncertain building world, there are some certain facts:

1. The Andersen Corporation is now bending and will continue to bend every ounce of effort to maintain its high standard of quality.
2. Although delays are going to be unavoidable, we shall continue to give all the service that it is humanly possible to give.
3. The building of new homes in defense areas is of vital importance to the defense program. An increasingly large share of our windows is going into these areas.

4. Andersen's part in the conservation of essential defense materials is two-fold: first, we are making a window that is primarily of wood. Thus we make a minimum of demand upon the metals so urgently needed for the weapons of war. Second, even on those materials that are used in smaller quantities in our windows, our research personnel has been conducting an intelligent search for satisfactory materials on which there is no shortage of supply. We already have achieved gratifying results.

5. It is worth while defense economy to build homes with weatherstripped windows whose tightness assures positive fuel savings. A few pounds of weatherstrip metal in a house will conserve oil and coal for defense work. Lifetime construction, moreover, eliminates costly repairs and replacements.

6. For busy builders, whose time is now more precious than ever, the modern *pre-fabricated* window unit, as built in the Andersen factory by specialists who have maintained the highest of standards for 37 years, is the wise choice.

We all have the faith that we are building a new and better country. By perseverance, by industry, by traditional American ingenuity, we'll get the job done.

ANDERSEN CORPORATION
BAYPORT, MINNESOTA

Fred C. Andersen
PRESIDENT

MAKERS OF ANDERSEN NARROLINE (DOUBLE HUNG), CASEMENT, HORIZONTAL
GLIDING AND BASEMENT WINDOW UNITS, AND ANDERSEN MASTER WINDOW FRAMES

WEISWAY BATHS

SAVE
Space-Time-Labor-Freight



Match the Quality of Finest Plumbing Fixtures

● In modernizing or new building to meet today's acute housing requirements Weisway Cabinet Showers serve the national need for conservation. These independent, leakproof units provide a complete bath in a 3-foot square or less, without special treatment of building walls or floor.

Specify Weisways with full assurance that in durability as in fine appearance these modern cabinet showers meet the most rigid quality standards. Shipped knocked down at lower costs, these leakproof cabinets are easily, quickly installed—by one man if necessary. Receptor of everlasting vitreous porcelain enamel on Armco iron is light in weight, yet durable—requires no underpanning. Foot-Grip, No-Slip floor is safe, sanitary, easy to clean. Walls of vitreous porcelain, or baked synthetic enamel with 4-way protection against corrosion.

Mail Coupon for details on
the complete Weisway line.

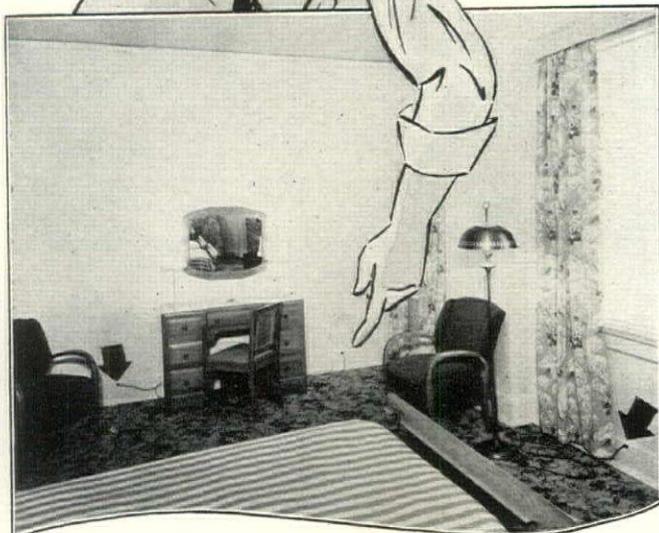
Henry Weis Mfg. Co., Inc. (Est. 1876)
1002 Oak St., Elkhart, Indiana

Without obligation please send details and specifications on Weis Cabinet Showers;
[] for homes, [] industrial buildings, [] institutions.

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550 ROOMS BEING EQUIPPED
WITH PLUGMOLD
IN THIS FAMOUS HOTEL!

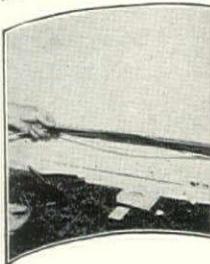


ATLANTA'S Henry Grady points to a better room wiring system for ALL hotels . . .

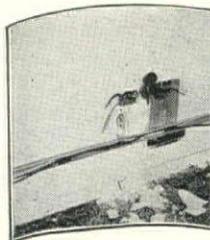
Every room in this hotel is now being wired for lighting and convenience with Plugmold. Not only does the management consider this a step forward in guest relations but the installation of Plugmold has also resulted in the saving of some 6,000 Multiple Outlet plugs which were formerly lost or stolen each year.

This is just one example of the way in which Plugmold fits into the planning of modern buildings for greater electrical convenience and efficiency . . . not only hotels, but also clubs, restaurants, offices, factories, hospitals, public buildings and homes.

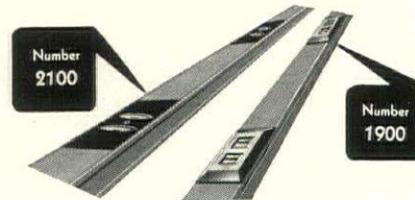
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Plug-in-Anywhere Wiring Systems

Here's a typical example of
CARPET COUNSEL SERVICE



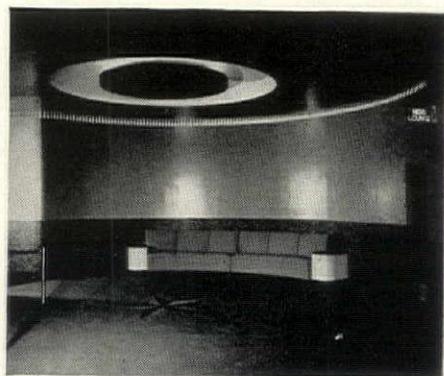
Solid Color Bigelow Lokweave Matches Architecture. Two views (this and top illustration) showing the lobby-foyer-lounge area. Only continuous carpet with a poured-on look that could stand up under heavy traffic could be used here.

ARCHITECT CHARLES N. AGREE selects
BIGELOW LOKWEAVE to play
 a star role in the new **ROYAL THEATRE, DETROIT**

Like Charles N. Agree, designer of the beautiful, modern ROYAL THEATRE, top notch architects depend on Bigelow Carpet Counsel to recommend carpet that will withstand normal traffic paths and is styled right to fit the architectural design . . . And they get the advice of experts at no extra cost per yard.

If you are ready to consider carpet replacements or a new installation, ask for Carpet Counsel by Bigelow Weavers. This service includes guidance in the choice of weaves, grades, patterns and colors, that keeps the cost within your budget.

Consult your dealer who will bring you to one of our offices—Bigelow-Sanford Carpet Co., Inc., 140 Madison Avenue, New York, N. Y.



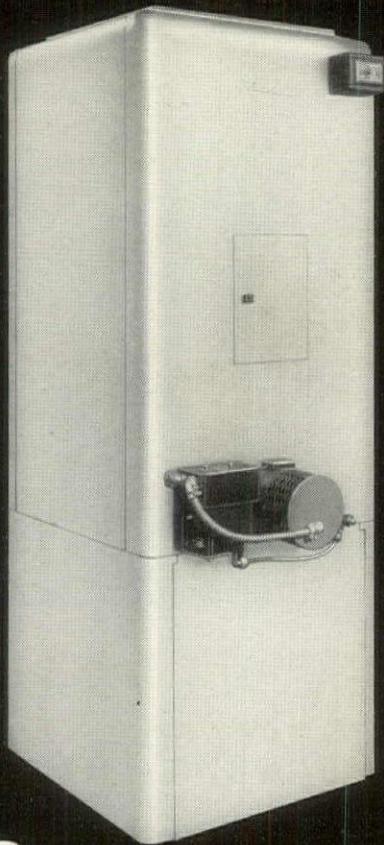
Bigelow Lokweave Reduces Cutting Waste and Permits Inserted Accents. By the same method that made possible the insertion of a contrasting star design, savings on waste carpet were made at irregular and curved wall spaces.



ask for carpet counsel by
BIGELOW WEAVERS

New NORGE

ESPECIALLY DESIGNED
AND PRICED FOR
DEFENSE HOUSING



*Immediate
Delivery!*

Here's a brand-new low-cost Norge oil-fired unit that will meet your heating "specs." Model OD-70 is only 26" square and 67" high; is quickly and easily installed in basement or utility room. Ideal size for \$3000 to \$6000 homes. All controls fully automatic. Two-stage Pressure Vaporizing burner fully approved for all U. S. insured loans including CS-75-39. Beautiful pearl gray baked enamel finish on streamlined cabinet. Backed by two of the greatest names in American industry—Norge—Borg-Warner. Write or wire.

NORGE HEATING & CONDITIONING DIVISION
BORG-WARNER CORPORATION

1234 Kercheval Ave., Detroit

A MODEL FOR EVERY HOME

See **NORGE** before you buy!

FORUM OF EVENTS

(Continued from page 114)

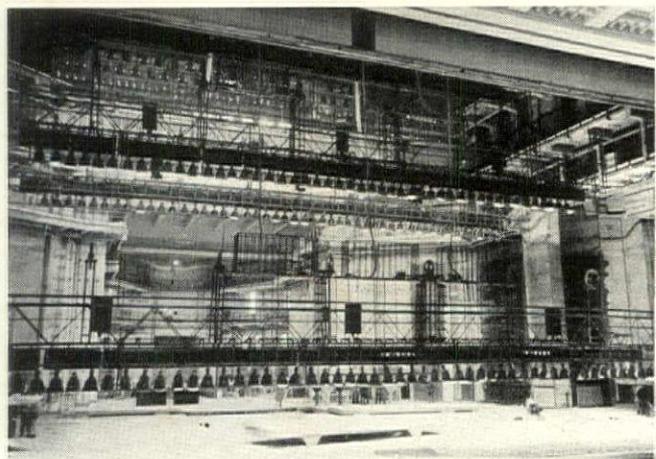
RED ARMY THEATER

The present generation of Russian architects has been conspicuously afflicted with grandomania, a malady which has by no means run its course in the U.S., as a glance at page 102 may suggest. Although there is a strong younger group of architects, and many a Soviet cartoonist has held up horrible examples of overstuffed facade architecture to popular ridicule, the production—at least up to June 22—has continued undiminished. A recent example is this Red Army Theater in Moscow where both the plan and the columns are shaped as five-pointed stars.



Preslit Photos

Built and equipped with the special lavishness the Soviets have always reserved for their children, army and theater, the structure is as admirable technically as it is naive esthetically. The stage can be raised or lowered through its entire width, and it is the first to combine revolving drums with an elevating and traversing system. The lighting system, illustrated in the lower photograph, includes an entire series of lighting bridges which provide comprehensive and flexible



illumination. A rehearsal room, also used as a concert hall, has a proscenium width almost equal to that of the big stage. At the present writing the theater is still intact. Whether it goes the way of the theaters in Minsk, Smolensk and Kiev, or remains to become a source of irritation to future generations of architects, now depends on the same Red Army it was built to serve.

Now a **permanent** wall-covering that can be installed smoothly around curves and corners!

NAIRN LINOLEUM GIVES NEW FREEDOM IN PLANNING UNUSUAL DECORATIVE EFFECTS!

NAIRN Wall Linoleum is so *flexible*, you can do practically anything with it! Builders and architects both find it an amazingly versatile and adaptable material

For instance, note how in the bathroom illustrated the Nairn Wall Linoleum has been installed smoothly—without a crack or wrinkle—around the *curved walls* framing the recess for the lavatory Note, too, how the unusually shaped dropped ceiling above the tub has been covered with Nairn Wall Linoleum—as sleekly and smoothly as if it were molded there!

This modern wall-covering has the added advantages of being *permanent*, fade-proof, crack-proof, washable!

Each of the more than twenty patterns available is color correlated with Nairn Linoleum for floors, thus making possible the most pleasing, harmonious room color schemes.

What's more, Nairn Wall Linoleum costs far less than other types of permanent wall treatments! When installed by Authorized Contractors, both Nairn Floors and Walls are fully guaranteed.

CONGOLEUM-NAIRN INC., KEARNY, N. J.



HERE'S A CLOSE-UP color photograph of the Nairn Wall Linoleum pattern used in the lavatory recess in this bathroom—"St. Alban's Red," No. 7955. Note the richness of the colors—the delicacy of the marbling—the blending of light and deep shades.

THIS IS A CLOSE-UP of "Rose Agate," No. 7989, the Nairn Wall Linoleum pattern used on all other wall surfaces in this bath. See how perfectly it harmonizes with the deeper hues of "St. Alban's Red."

▲ **SEE HOW PERFECTLY** the floor here, Nairn Linoleum, "Mahogany," No. 1104, is Color Correlated with the two Nairn Wall patterns used. Feature strips in the floor are "White" and "Dusty Pink."

FREE BOOK

Send for *free* 16-page booklet. Write Congoleum-Nairn Inc., Kearny, N. J.

NAIRN
WALL LINOLEUM



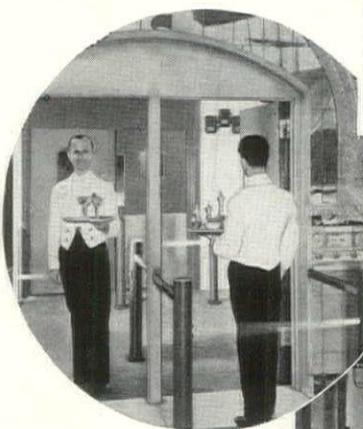
COMPLETE FACTS
for your files on
"Electric-Eye" Control
for Hinged Doors

YALE'S

NEW BULLETIN TELLS HOW
"THE PHANTOM DOORMAN"

AUTOMATIC DOOR **OPENER**
CLOSER

- 1.—prevents congestion and accidents
- 2.—keeps doors clean
- 3.—saves repair bills
- 4.—builds good will

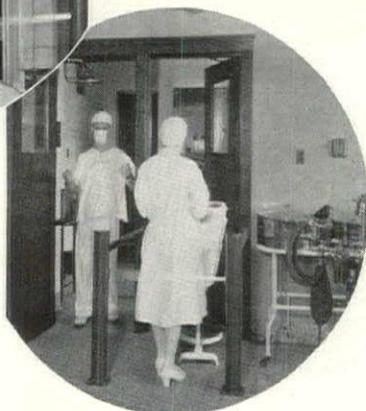


**PHANTOM
IN THE RESTAURANT**

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"The Phantom Doorman" installed in between operating room and scrub rooms at Chicago Municipal Tuberculosis Sanatorium for convenience, sanitation, efficiency.



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PLUS BLUE-PRINTS TO FIT YOUR PLAN

Yale's folder "The Phantom Doorman" answers your questions about concealed operators, hydraulic control, cost of operation and maintenance, and simplicity of installation. See also SWEET'S files, 16/19 (reprints available on request).

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Please send free Bulletin, "The Phantom Doorman", together with Information Sheet enabling me to get price quotation and complete blue-prints.

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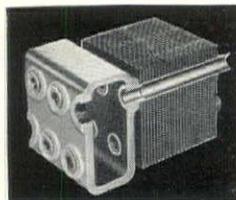
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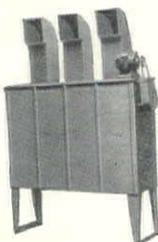
**High Efficiency
HEATING**



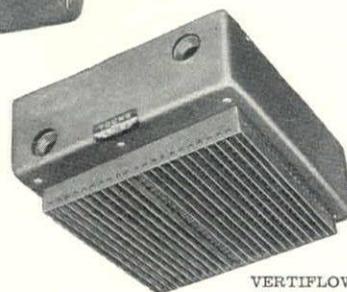
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Copper alloy tubes are rolled (not brazed) into sturdy, cast alloyed iron headers—then reinforced with snug-fitting ferrules for greater strength, longer life.



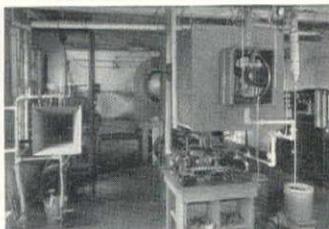
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Young heating units have a record of high efficiency and economy in all types of installations. That's because every step in their production—design, selection of materials, fabrication and final testing—must meet rigid standards to insure the highest degree of heating efficiency. Painsstaking research in the laboratory and in the field assures you that their performance will meet the most exacting requirements of modern heating plants. Available in a wide selection of sizes and capacities. For complete details write:

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All Young units are tested and rated for heat output and air delivery in accordance with Standard test codes of the American Society of Heating and Ventilating Engineers.

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• ENGINE JACKET WATER COOLERS

REG. U.S. PAT. OFF.

AND ON TOP, A CROWN OF

Gleaming Beauty!



Architecturally, you always should consider Republic ENDURO Stainless Steel from two viewpoints—the artistic and the practical. And both are demonstrated in this new tower building recently erected for Sprague, Warner, Inc., Chicago, Illinois.

By using ENDURO for the roof, the architect placed a crown of gleaming beauty atop the tower to enhance its attractive design. By using ENDURO, too, he gave the building owner a roof that will last for the life of the structure—a roof that will require little or no maintenance, except an occasional cleaning to restore its original glistening surface.

When you want to add that distinctive finishing touch to your designs—think first of Republic ENDURO Stainless Steel—the most versatile of metals. It contrasts or blends well—it may be brightly attracting or softly subdued—smooth and flat or worked by forming or etching—used in its natural silvery sheen or etched and colored. And it resists corrosion and oxidation—lasts indefinitely.

Write us for complete architectural information on ENDURO, or see Sweet's 13/6. See Sweet's sections 9/1, 15/20, 21/3, 21/21, 23/5, 24/1, 27/3 and 28/5, too, for other Republic steels and steel building products—the most complete line produced by a single manufacturer.

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SPRAGUE, WARNER, Inc., Tower Bldg., Chicago, Ill.
Architect: A. Epstein & Co. • Contractor: J. Smith & Co.

The detail drawing shows how ENDURO was laid over a plywood deck supported by steel trusses. Standing seams were used on the horizontal ribs, while flat-locked joints were used on the horizontal seams.

Other Republic Steel products in the Sprague, Warner, Inc., office building are Truscon Steel Windows and Screens.



REPUBLIC *Enduro* STAINLESS STEEL

NOBODY KNOWS TOO MUCH ABOUT YOUR BUSINESS



As a matter of fact, no outsider *knows enough* about your business.

If we can agree on that, can we agree that here is the clue for certain manufacturers of building products whose production is blocked by shortages or whose market may shrink through priorities?

They see the wisdom of advertising now for the active and competitive post-war building market. But with their current production virtually commandeered they wonder *how* and *what* to advertise.

To such manufacturers we repeat: Nobody knows *too much* about your business.

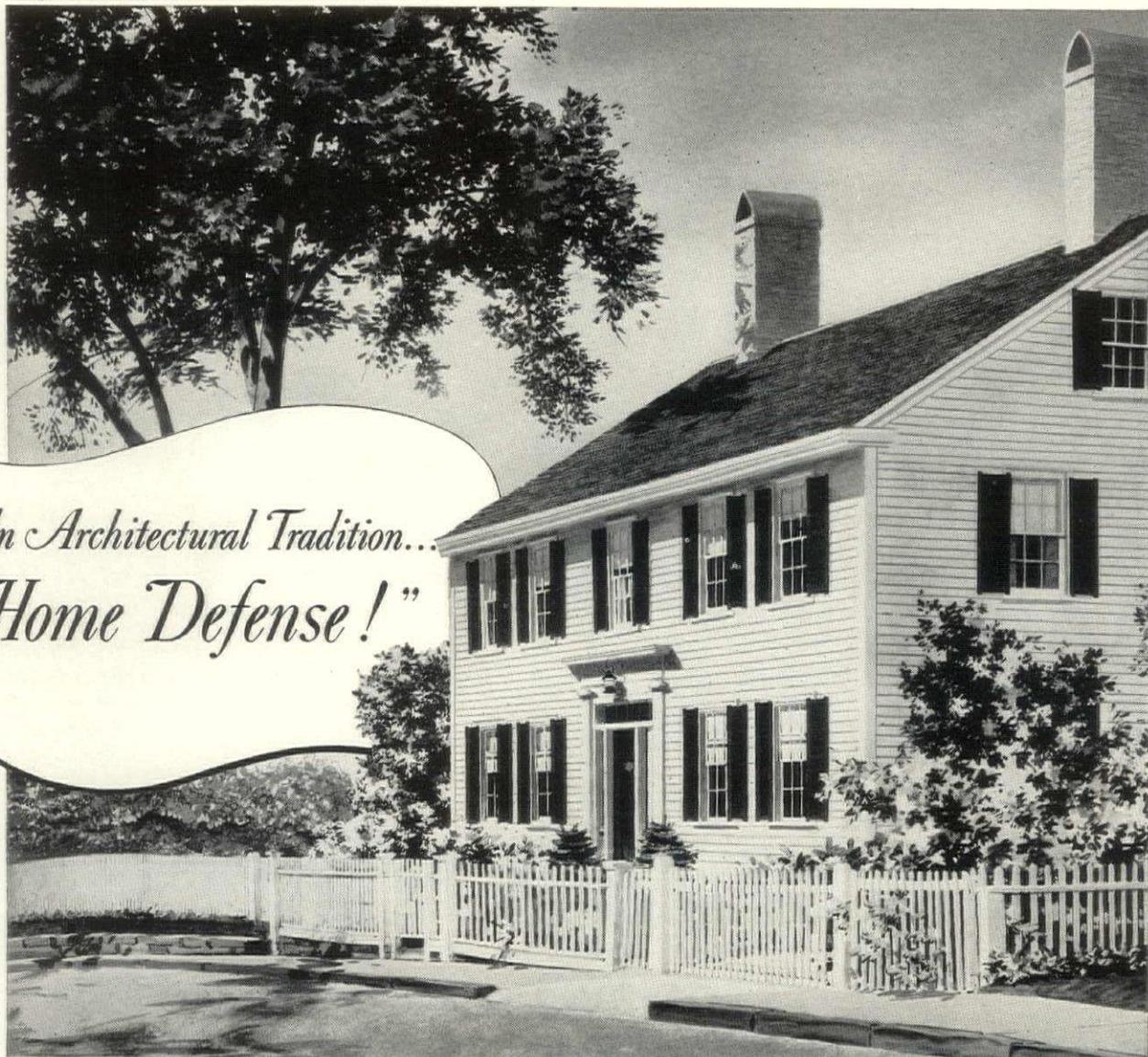
There is no better way to safeguard your future than to develop a market which is really informed about your company and about your products . . . what they are, how to use them, where to use them.

225 successful manufacturers are advertising in THE ARCHITECTURAL FORUM right now. They know that post-war U. S. will not be built in a day, and the people who will build it cannot absorb their story—or yours—overnight. They are keeping an eye on the post-war market and keeping the post-war market's eye on them. They are using a magazine which surrounds today's and tomorrow's market, reaching an audience that functions *after* as well as *before* specifications are written.

There is no shortage of reader interest in

THE ARCHITECTURAL
FORUM

FOUNDATION
COVERAGE
OF THE BUILDING MARKET



An Architectural Tradition...
 "Home Defense!"



MANY an old Colonial dwelling that echoed to the midnight cry of Paul Revere still stands today . . . an eloquent reminder that our forefathers knew how to defend their homes against the attacks of weather as well as of martial foes.

Safely through the storms of two centuries these historic homesteads have come down to us—gleaming monuments to those early Americans who planned them well and wisely protected them with pure white lead.

Today not only "every Middlesex village and farm" but a whole nation of homes knows white lead as its first line of home defense against the elements. And America's architects have played an important part in spreading the tradition of white lead's excellence in protecting and beautifying property.

They know that Dutch Boy Pure White Lead is the dependable ally of the man who plans for the future. That it means paint which sturdily resists the onslaughts of rain and snow and sun . . . keeping homes and other buildings young in appearance and guarded well. Paint which wears slowly, smoothly—instead of cracking and scaling—thus saving the expense of burning and scraping when it finally does become time to repaint.

And now the Dutch Boy offers architects two important new developments: a *Triple-Improved Dutch Boy Paste White Lead*—better than ever in whiteness, body, hiding; and the new Dutch Boy *Ready-to-Brush Pure White Lead Paint*.

Both are worthy of your proudest work.

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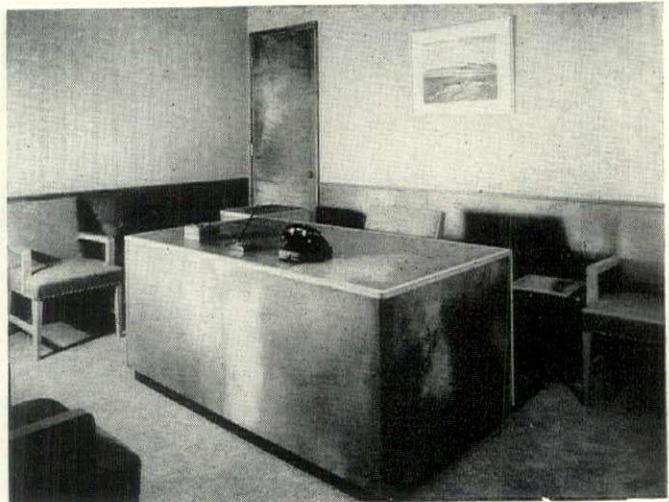
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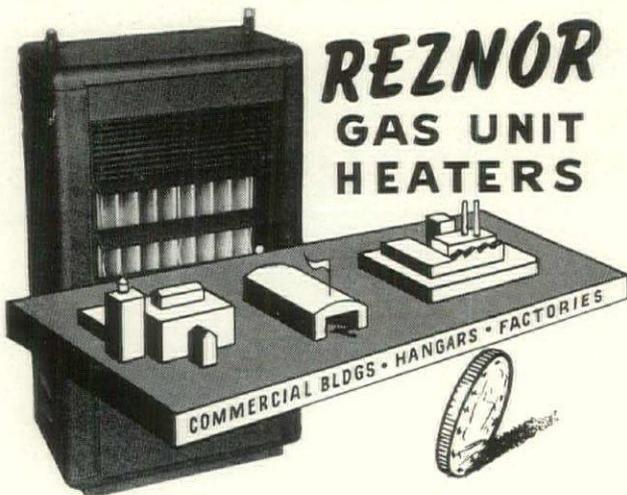
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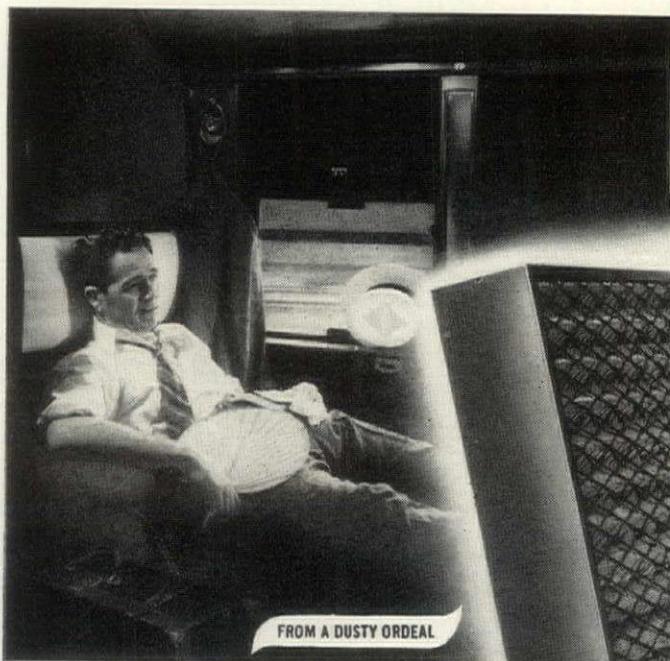


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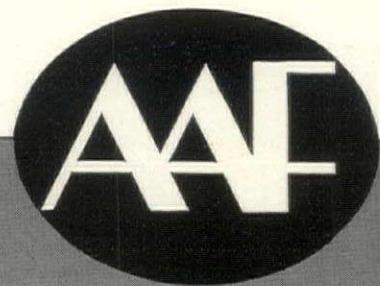
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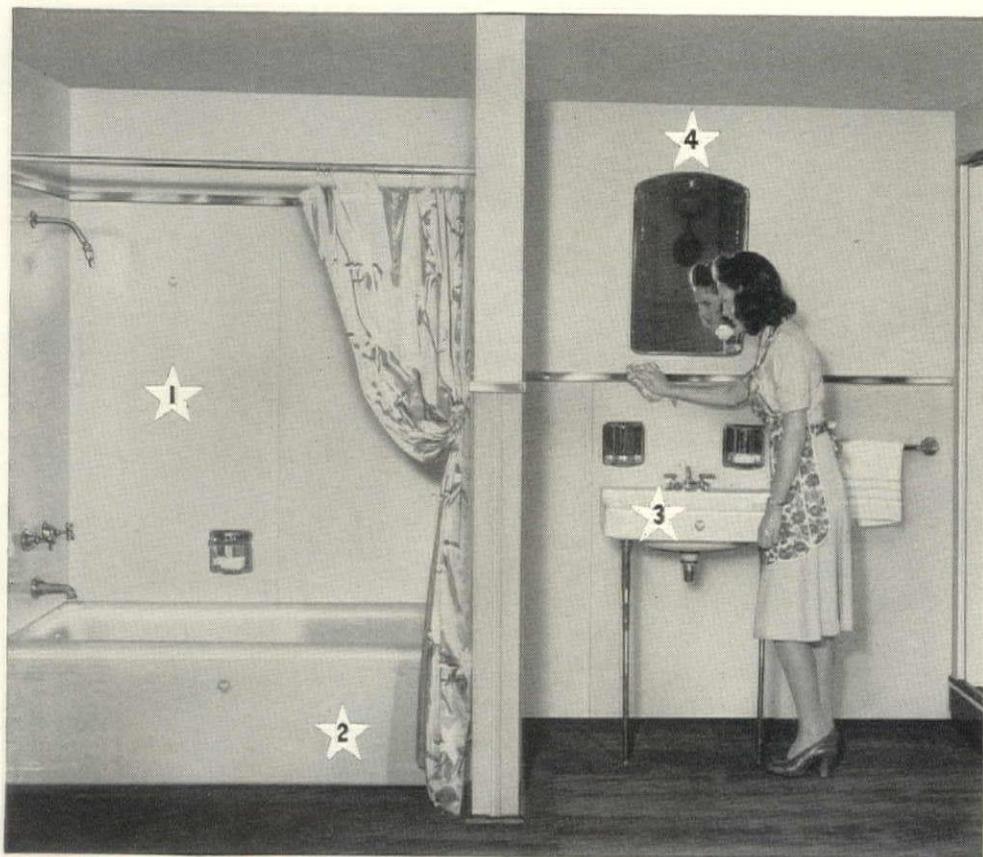
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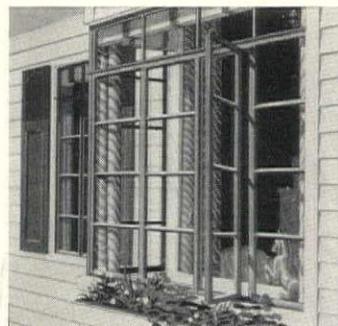
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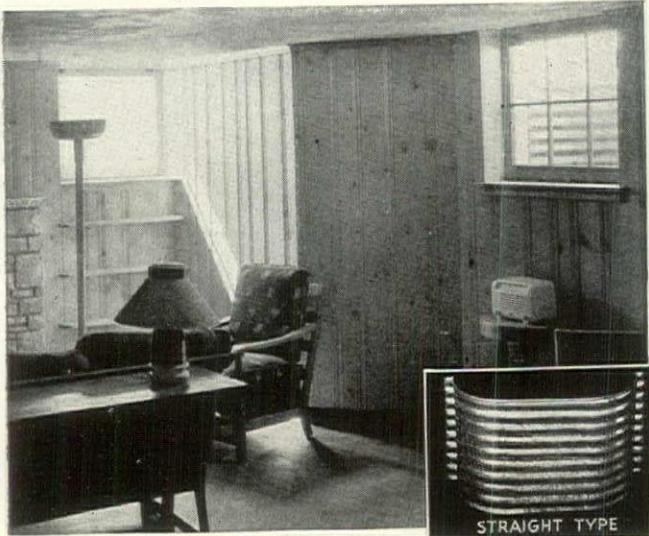
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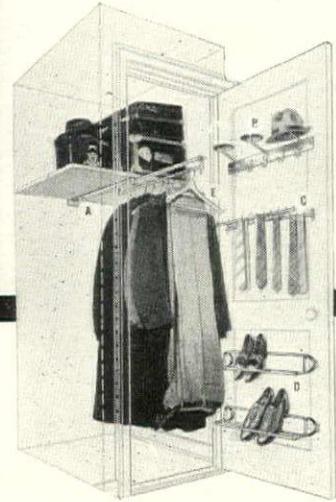
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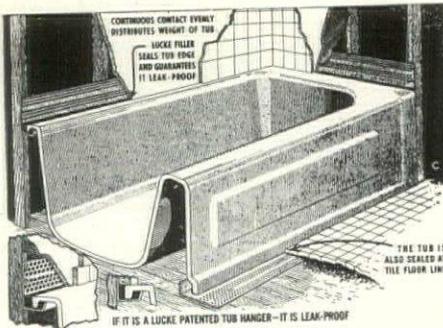
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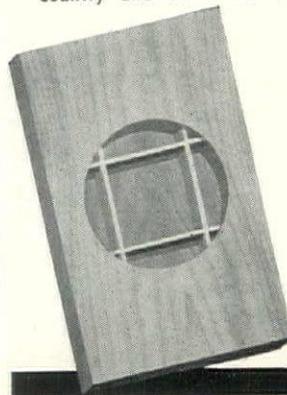
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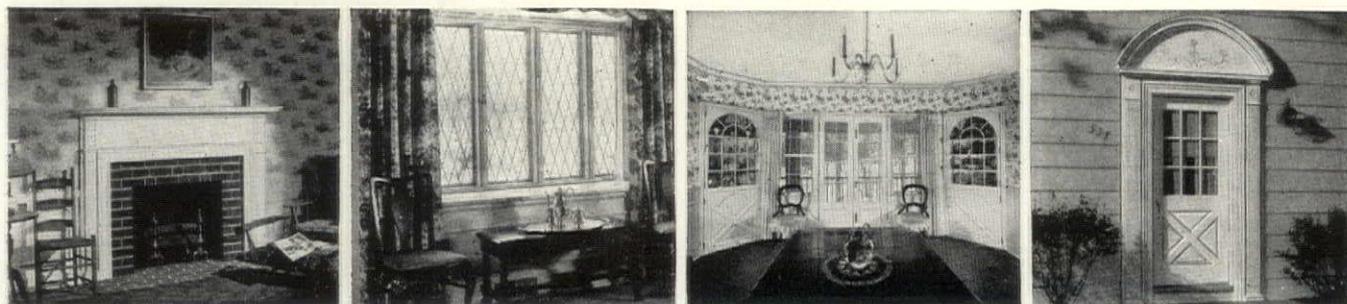
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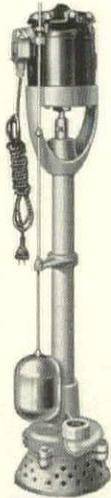


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Use **DONLEY**
ATTIC VENTILATORS
for defense housing



**LOW COST
EASY TO INSTALL**

Minimum cost, but good design and construction—that's what Defense housing must have and that's why you should use Donley Steel Attic Ventilators.

Good construction calls for ventilated attic space—Donley Ventilators let you include this feature at maximum speed and rock-bottom cost. Sized to fit standard masonry construction for easy fitting. Rectangular, 1/2-circle and 1/4-circle styles; rectangular style in 10 sizes from 8" x 11" up to 18" x 36", with free area range of 23 to 234 square inches.

Notched at bottom of body to admit top edge of siding, see illustration. Easy to install, no wood trim needed. Made of 20 gauge steel. Painted with two coats of special, high quality paint—complete with bronze fly screen fastened to the inside. Consult your dealer for further details or see our catalog in Sweet's.

The **DONLEY BROTHERS Co.**
13945 MILES AVENUE • CLEVELAND, OHIO



For
**Hospitals
Hotels—**

HENDRICK FIXED LOUVRE GRILLE

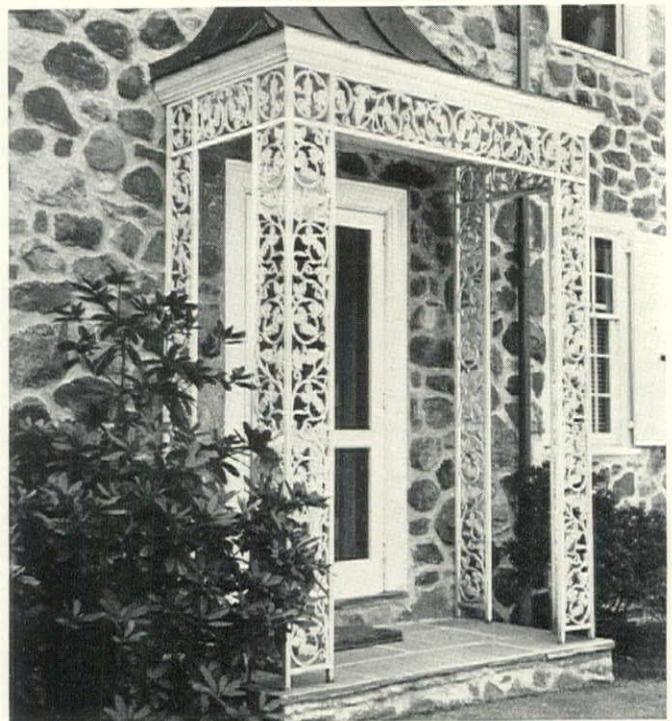
Ideal for hospitals, hotels, bathroom doors, etc., is the Hendrick Fixed Louvre Grille. Built of a series of strips, bent to a fixed angle and rigidly fastened into a band frame, this unique door grille permits free circulation of air but prevents vision from any angle through the grille. Easily installed in any door.

Hendrick Fixed Louvre Grille is usually furnished in No. 18 U. S. Gauge steel, painted, enameled or electroplated. Also available in aluminum, bronze or .05" thick stainless steel. Prices and further data on request.

Hendrick Manufacturing Co.

20 Dundaff Street, Carbondale, Pa.

Offices and Representatives in principal cities. See 'phone book. Mfrs. of Mitco Open Steel Flooring, Mitco Shur-Site Treads and Mitco Armorgrids, Hendrick Perforated Metals and Screens.



WRITE FOR OUR COMPLETE CATALOGUE OF
CAST IRON PORCHES, BALCONIES AND
RAILINGS, GARDEN FURNITURE

SMYSER-ROYER COMPANY

YORK, PA. • ESTABLISHED 1840
PHILADELPHIA OFFICE 1717 SANSON ST.



51.6

EVERY inhabited island in every period of history has presented its temptation to invasion. Every island people has been bred to expect it, and to resist it.

But the successful defense of the island of Britain depends on more than the courage, determination, and insular tradition of the British people. It depends also, to a large extent, on the American people . . . on the firmness of their belief that Britain and the outer islands represent the last outposts of freedom.

And that belief grows stronger every day: 51.6% of the American people would agree to defend Great Britain with armed forces if Germany tried to take it. 50.5% would defend Iceland. 48% would defend the Azores. 44.8% would defend Dakar.

These vital statistics were recently published by FORTUNE. Using the techniques which enabled FORTUNE to predict within one per cent the outcome of

the last two presidential elections, the FORTUNE Survey went to the American people with a map of the world and asked them to point out the places which they were now willing to defend.

FORTUNE reported that the nation has made up its mind that this is our war. FORTUNE reported that about 50% or more of the American people with definite opinions would approve the defense by force of every strategic point on the map of U. S. outposts.

And this reporting was news. Here, for the first time, was recorded a momentous shift in public opinion. (In January, 1940, the majority of the American people would not even approve the defense of Bermuda or Brazil. In August, 1940, only 17.1% would protect the Dutch East Indies.)

It was news in New York, where the findings of the FORTUNE Survey were reprinted by five newspapers—two of

them using page one. . . . It was news in Washington and to people over the length and breadth of the country, to whom it was carried by United Press wires, radio commentators, and newspaper columnists. It was good news to the people of Britain themselves, many of whom felt that this country was stirring, but who were nevertheless glad to see it stated clearly and in figures.

The FORTUNE Survey is an integral part of FORTUNE magazine. It is part of FORTUNE's responsible and unique job—which is to supply accurate, documented, and interpretive information to the men—in Business and in Government—who guide American destiny.

Fortune

SPECIFICATION AND BUYING INDEX

The advertising pages of THE ARCHITECTURAL FORUM have become the recognized market place for architects and all others engaged in building. Each month these pages offer the most complete guide to materials, equipment and services to be found in any magazine. A house or any other building could be built completely of products advertised in THE FORUM. While it is not possible for a magazine to certify building products, it is possible to open its pages only to those manufacturers whose reputation merits confidence. This THE FORUM does.

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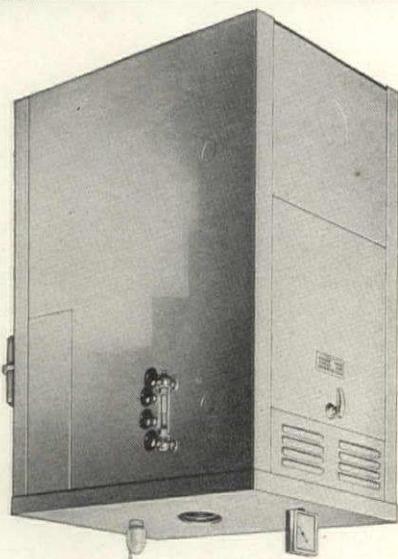
Keep heating costs low in defense housing with

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units for all conditions - all fuels - all needs

FITZGIBBONS 400 Series STEEL BOILER

The choice of architects and builders wherever low cost heating in small homes is needed. Beautifully adapted to defense housing using radiator heat with oil, gas or stoker firing, or with coal hand firing. Built-in copper coil provides domestic hot water. All the advantages of Fitzgibbons steel boiler construction in an attractively jacketed unit priced for the field it serves.



Warm air furnace, boiler, air conditioner — if it's a Fitzgibbons it is quickly and easily installed, priced to fit its market, exceptionally low in fuel consumption. Get the facts — mail the coupon.

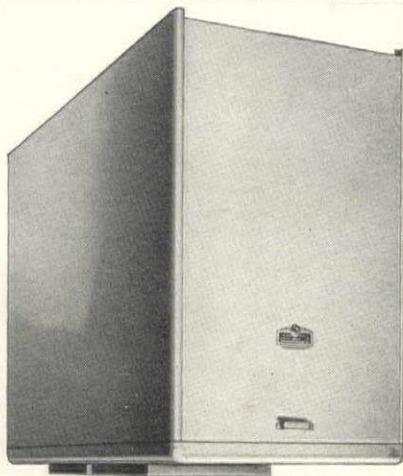
WARM AIR FURNACE 80 FWA

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A distinctly small home air conditioner which has every Fitzgibbons advantage of welded steel construction, and extremely low fuel consumption. Warm, humidifies, filters and circulates the air. Quiet in operation, beautiful in appearance.



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Send me details on Fitzgibbons defense housing heating unit.
 80 FWA 400 SERIES 65-80-100DA

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Send for this book fully describing Bonderizing—what it is—how it is applied—who uses it—what it means in finish protection to fine products. Get your copy now.

PARKER
Processes CONQUER RUST
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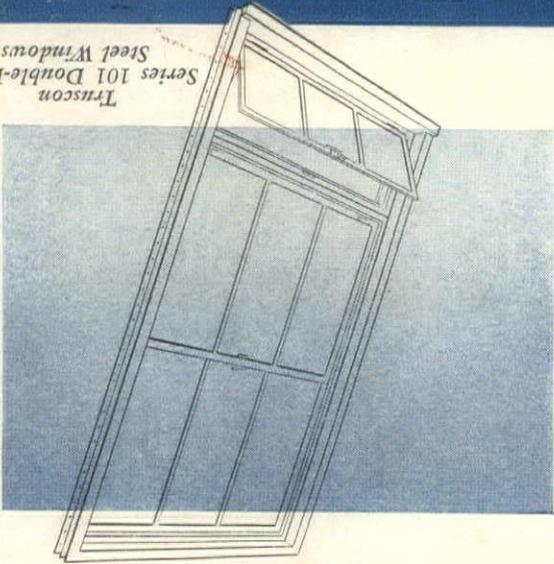
portant. Being constantly exposed to humidity and moisture, corrosion is an ever present hazard. For these reasons the beautiful Yorkaire cabinets are Bonderized for protection from rust. Bonderizing provides "staying" qualities for the wrinkle finish, increasing Yorkaire fame for durability. Bonderizing is being used more and more on sheet metal units requiring a high degree of rust resistance over a long period of years.

PARKER RUST PROOF COMPANY
2180 E. MILWAUKEE AVENUE • DETROIT, MICHIGAN

York controls the unpleasant features of the natural elements. With 56 years' experience in refrigeration, the York Ice Machinery Corporation brings to the building industry, equipment for tempering both heat and cold. It is made in many types and sizes, to fit the requirements of home, office or store, from the "personalized" room size unit to the central plant for an entire building. Scientifically designed for highest efficiency, materials were selected for longest service. Being long lived, fixed equipment, finish is vitally im-

YORKAIRE
Bonderizing
CONTROLS TEMPERATURE
CONTROLS
RUST

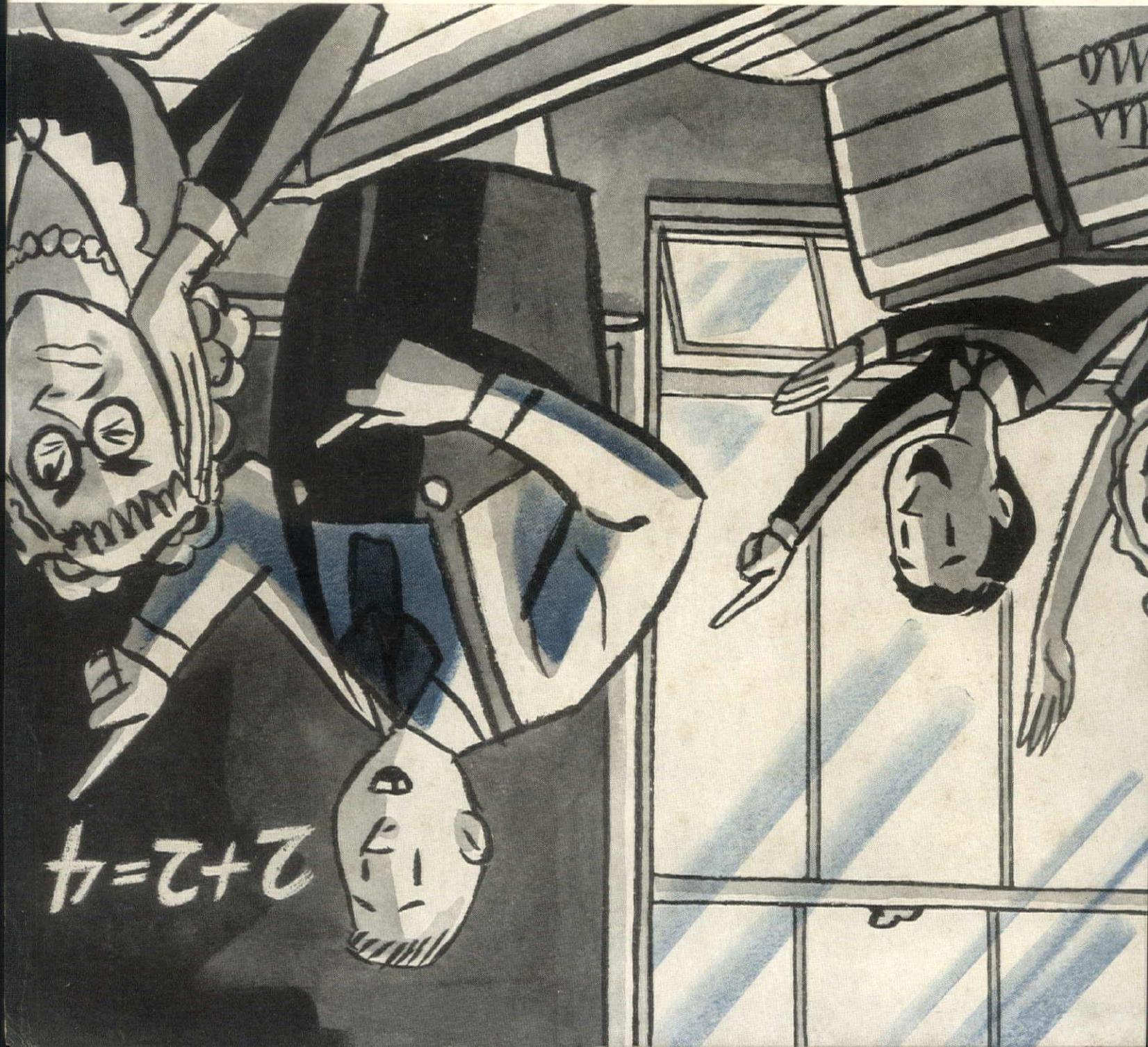
Truscon Series 101 Double-Hung Steel Windows



“Let in natural daylight and air” . . . refer to Truscon’s 80-page section in Sweet’s for suggestions on distinctive window treatments that enable you to create prestige-building structures. Individually-bound copies of this material are available on request. And if you want further help, there’s always Truscon’s dependable engineering service that works with you right on your board, to iron out any really tough jobs you may have. Truscon Steel Company, Youngstown, Ohio, 51 Sales Engineering Offices, 29 Warehouses. Subsidiary of Republic Steel Corporation.

It’s easy to see through the problems of developing out-of-the-ordinary building designs, when you employ all the advantages offered in the wide range of Truscon Steel Windows. Their fine-quality features are an inspiration toward the development of unusual exterior and interior effects, and their low cost offers welcome economies.

“Look, teacher, what happens when we get Truscon Steel Windows in the classroom!”



OVERHEAD DOOR CORPORATION

HARTFORD CITY, INDIANA, U. S. A.

MIRACLE WEDGE

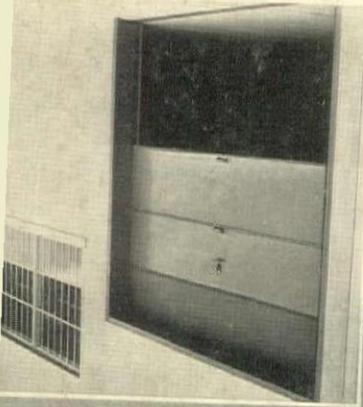
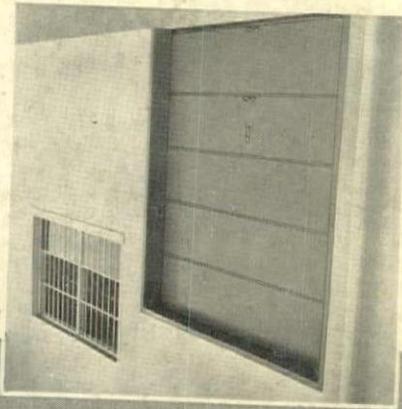
Trade Mark
WITH THE



THE

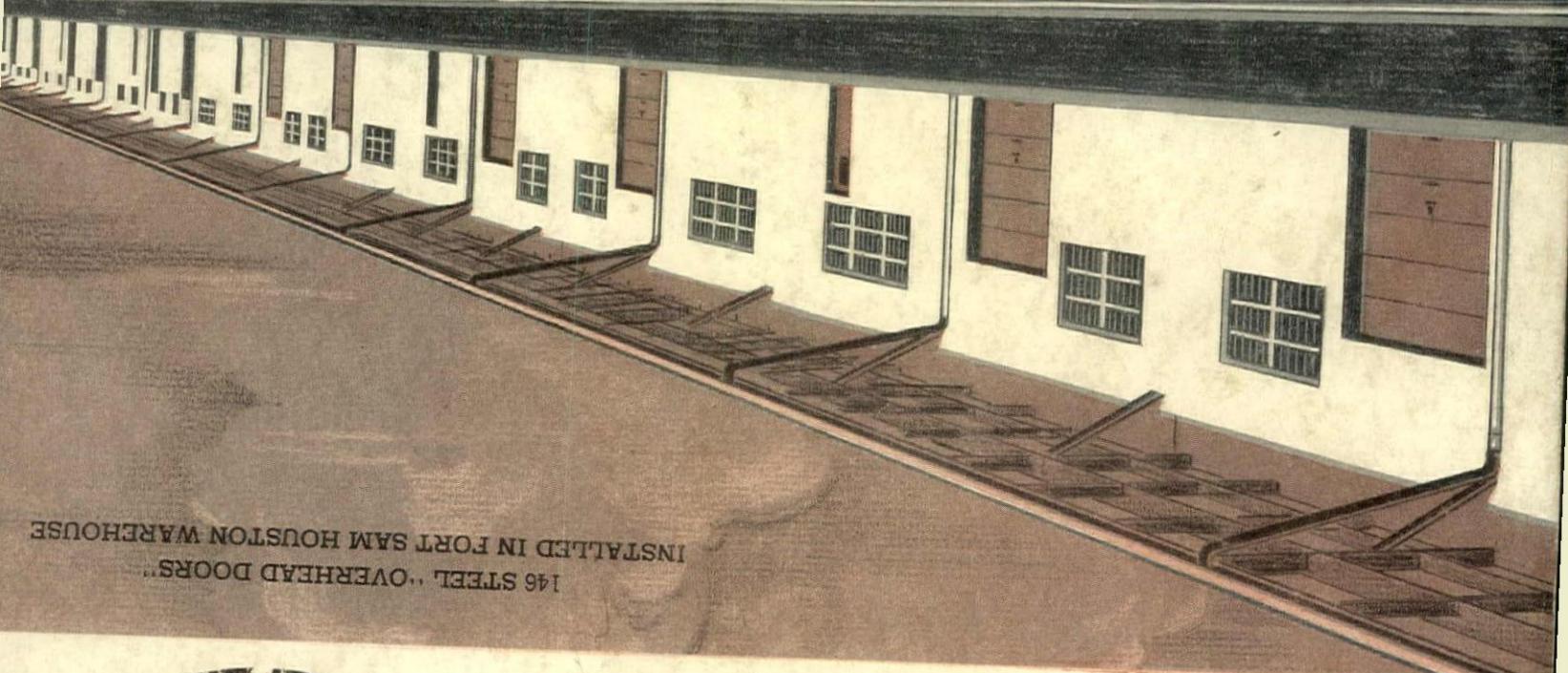
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OPENS EASILY!

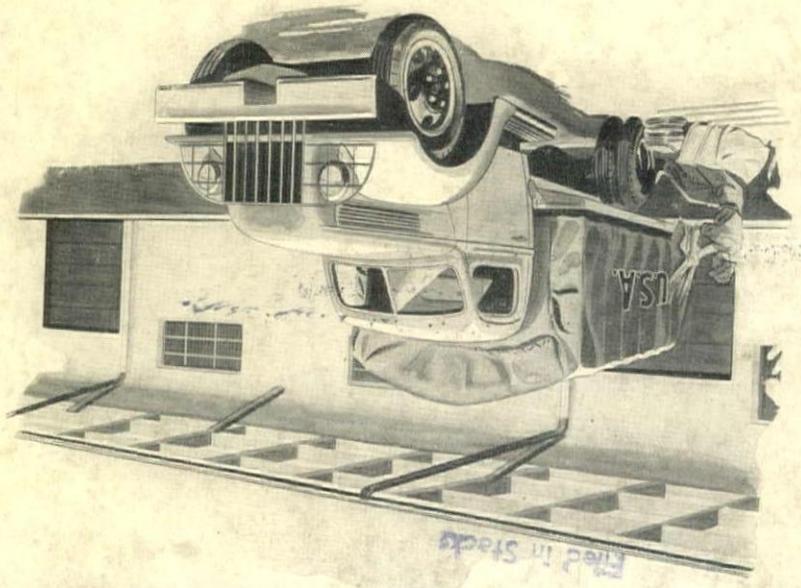


The "OVERHEAD DOOR" with the Miracle Wedge has proved ideal for defense construction. From Texas to New-foundland and from Florida to Alaska, The "OVERHEAD DOOR" has been installed in warehouses, loading platforms, depots, private garages, coast guard stations and similar buildings. Wood or steel, hand operated or electric, it wedges tightly, opens easily, works in any kind of weather. Tracks and hardware of Salt Spray Steel are standard equipment. Expertly built as a complete unit by a Nation-Wide Sales-Installation-Service!

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146 STEEL "OVERHEAD DOORS" INSTALLED IN FORT SAM HOUSTON WAREHOUSE



Filed in Stocks