

THE
ARCHITECTURAL
FORUM

INCLUDING "BUILDING MONEY"

DECEMBER, 1937

1937 REVIEW: COMMERCIAL . . . PUBLIC . . . SCHOOLS
HOUSING . . . APARTMENTS . . . INDUSTRIAL

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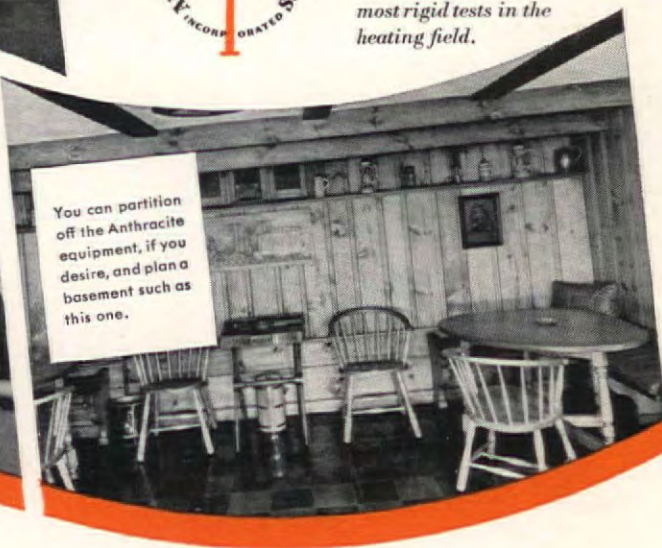
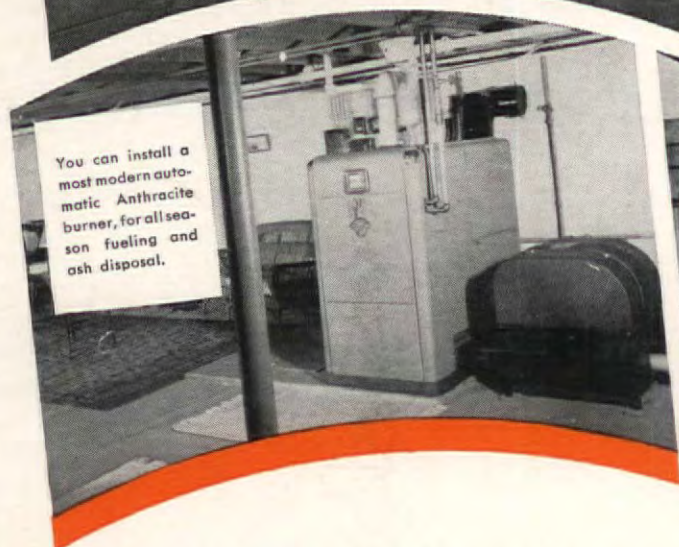
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THE SOLID FUEL FOR SOLID COMFORT

DECEMBER 1937

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Editor, Howard Myers; *Managing Editor*, Ruth Goodhue; *Associates*, George Nelson, A. C. Shire, Cameron Mackenzie, Paul Grotz, Madelaine Kroll Thatcher, Peter Lyon, Henry N. Wright, John Beinert, G. H. V. Baker, Barbara Hunt, F. Louise Peck.

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VOLUME 67—NUMBER SIX

THE MONTH IN BUILDING

VOLUME

PERMITS (September)	\$128,510,918
Residential	53,584,547
Non-residential	43,695,788
Additions	31,230,583
August, 1937	140,490,907
September, 1936	126,471,439
Permits from Dept. of Labor	

CONTRACTS (October)	\$202,080,900
Residential	65,484,700
Non-residential	75,102,400
Public Works and Utilities	61,583,800
September, 1937	207,071,800
October, 1936	225,767,900
Contracts from F. W. Dodge Corp.	

The building slump statistically apparent two months ago took no turn for the better last month, continuing to fall contraseasonally. It was still the category of publicly financed construction that led the decline, the administration's efforts to balance the budget blocking an important contribution to construction totals. Privately financed construction last month was 2 per cent above that of October, 1936 with the decrease from September only normal.

Total construction contracts for the first ten months of the year were 10 per cent higher than for the similar period of 1936. Residential building, which was 25 per cent better for the first nine months, had by last month fallen off to but a 20 per cent advantage for the first ten months. The gain in the non-residential category for the first ten months of 1937 was 19 per cent, for public utilities construction the gain was 45 per cent. Public works declined 20 per cent.

HELP. As Congress reconvened last month in extraordinary session, Building no less than Business was in a slump. The remedies which found most favor in administration circles were equally divided between tax easement for Business and credit encouragement for Building.

A broad view of Building at year's end showed that 1) the total volume of building for this year will be only fractionally above the 1936 total; 2) at the end of FHA's third year of mortgage insurance less than half its mortgages were for more than 75 per cent of valuation; 3) mortgage money was plentiful and interest rates lowest of the century; 4) labor and material prices stood at a ten-year top, while rents were only at 85 per cent of the top in the same period.

Such were the symptoms. Washington proposals were to raise FHA insurance to cover 90 per cent of the home mortgage, to encourage the formation of large private building companies, to modify the capital gains tax so that profits on building made within a two-year period would be tax exempt. Under current tax law, a builder making \$10,000 within twelve months must pay a Federal tax of \$700, or about the net profit on two good houses. Under the proposed modification, he would be exempt from this tax so long as he realized his profit within two years.

Presumably out were any solutions involving the reduction of labor or material prices or the introduction of second mortgage financing under any guise whatsoever.

Implementing this program FHA strategists were ready and waiting when Congress reconvened with a series of amend-

ments to their Act which called for 90 per cent coverage on home mortgages; for encouraging the construction of small apartment houses by regular builders; for liberalizing the section on mortgage associations in an effort to make them become an actuality; for expanding the powers and discretions granted under the large-scale housing section.

Realists saw little immediate benefit to be derived from such a program. Permissive legislation takes time to enact, more time to put into effect, still more time to be felt in the market. The relation of construction costs to rents, which is in fact the basic cause of the recession in Building, will in all probability have adjusted itself independently of Government efforts before the FHA can come to the rescue.

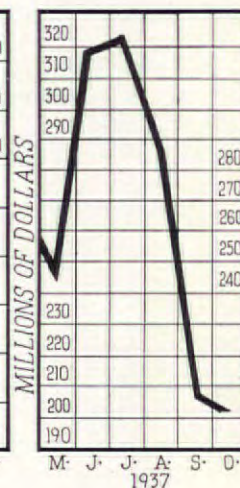
UNITED FRONT. To builders and contractors one of 1937's most disturbing phenomena has been the increase both in the wages and the militancy of organized labor. Last month at their convention in Atlantic City the Board of Governors of the Associated General Contractors were sufficiently perturbed by this phenomenon to break a tradition as old as the Association by taking official action on the question of its labor relations.

The AGC has 104 local chapters composed of construction men both in light (houses, offices, factories) and heavy (bridges, dams, tunnels) building. In towns where there are also Building Trades Employers Associations (which represent light construction) the AGC confines its membership to heavy construction employers; in the rest it repre-

PERMITS



CONTRACTS



sents both classes. Last month, under the prodding of their Washington Director Edward J. Harding, the AGC Board of Governors evolved a labor relations formula modeled closely after that of the BTEA in New York.

Frank purpose of this formula is to present a united employer front to the united trade union front. To this end the Washington office of the AGC will be revamped to serve as an arbitration center for disputes not settled in AGC locals. More significantly, it will prepare to act as a clearing house for labor relations problems and solutions. Its prime contributions to AGC members will be information on top and bottom union rates to help individual contractors in negotiations; and a model contract form which, it is rumored, will contain a compulsory arbitration clause, and one outlawing the jurisdictional strike. Further, the AGC will undertake to examine—and possibly to criticize—all union contracts signed by members.

\$100 FORUM. Last month in Manhattan's Waldorf-Astoria some 35 students of the building industry paid \$100 each to listen to ten hours of lectures on their business presented by the staff of the International Statistical Bureau, a high-powered research organization which serves some 1,000 industrial clients in all lines of business. Lecturers included the Bureau's chief, A. W. Zelomek, A. E. Janeway, Dr. Robert C. Shook, and L. Seth Schnitman, until last month head of F. W. Dodge's statistical research.

(Continued on page 4)



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THE ARCHITECTURAL
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VOLUME 67
Number 6

DECEMBER · 1937

THE MONTH IN BUILDING

Describing themselves collectively as "optimistic conservatives," the members of the Bureau's staff made the following analyses and forecasts:

¶ 1938 total building for 37 Eastern States on the F. W. Dodge basis will be \$2.61 billion as against an estimated \$2.84 for 1937, an actual \$2.67 for 1936.

¶ A telegraphic survey of single family houses built during 1937 showed over 6,000 still unsold and unrented in 24 picked cities. Samples: Kansas City, 300; Cincinnati, 400; Oakland, Cal., 777; Baltimore, 500.

¶ Estimated residential building on the F. W. Dodge basis will show the following quarterly totals in 1938: \$185 million; \$235 million; \$275 million; \$290 million. Total: \$985 million as against an estimated 1937 total of \$915 million, a 1936 actual total of \$802 million.

¶ Estimated number of single family dwellings to be built in the total urban area of the U.S. (3,165 cities) during 1937: 145,000.

¶ Estimated number of new single family dwellings to be built during 1938 on the Dodge basis of 37 States east of the Rockies, by cost: Under \$4,000—22,500; \$4,000 to \$7,000—45,000; \$7,000 to \$15,000—23,500; over \$15,000—3,500. Total: 95,000.*

On the question of the immediate future of the building industry the Bureau's spokesmen predicted no considerable improvement until about the middle of next year when rents and costs should come into favorable relation to each other. Currently they report a recession in both labor and material prices.

STRAUS STRAWS. Last month before the Conference of Mayors in Washington, USHA's new Administrator Nathan Straus shed considerable light on the Government's new practice and policy for housing. Most significant pointers:

¶ "My job as I see it will be to help each of you to do for his city what you yourselves want to do, in clearing slums and rehousing slum dwellers. It will be my task to be guided by you and the voters who elected you.

¶ "The USHA will never finance or subsidize projects except to rehouse slum dwellers.

¶ "We hope to be able to entertain applications [for loans and grants] on January 1, 1938.

¶ "As you know, the cities are called upon to bear at least 10 per cent of the capital costs of projects. Are you ready to provide that share of the capital cost of your first

project? Are you making provisions to finance your local housing authorities so that they may set up a working organization? Is your housing authority making a study of building costs to be quite certain that your project will come within the limitations of the Act?"

NAREB. The 10 per cent down payment, which has had the discreet support of the FHA for more than a year, got its baptismal blessing from the building industry last month at the 30th annual convention of the National Real Estate Board in Pittsburgh. The resolution



NAREB's Catharine

adopted by the 1,315 realtors asked for "an amendment of the National Housing Act to permit insurance of mortgages up to 90 per cent of land and structures on homes of \$6,000 or under."

Thus in Washington (see p. 2) and in Pittsburgh within the space of a month did the mortgage money fraternity of Building uncover a pair of potent opponents to their own policy of conservative credit. The pro and the con of the policy are simply stated. Easier credit means a greater debt in the hard times which are widely scheduled for 1943 or 1944; but a halving of the down payment required will greatly increase the number of buyers, put construction back on its feet. The nub of the diagnosis, therefore, is simply whether the national income can stand up sufficiently under the next depression for the bottom bracket of home buyers to continue 15- to 20-year payments which are weighted with higher-than-current amortizations.

Also in line with its insistence on easier credit, the NAREB came out for that banker's bane, a Federal mortgage discount bank; then topped off the financial resolutions with its perennial demand

for tax limitations—this time for a limit of 1½ per cent on the value of the property in any one year.

Elected president for the coming year to succeed Paul E. Stark was Brooklyn's Joseph W. Catharine, long active on NAREB committees. A shrewd progressive in his business, President Elect Catharine is head of the venerable Chauncey Real Estate Co., vice president of the equally venerable Brooklyn Savings Bank.

EARNINGS. A third of the major building material companies reporting earnings for the third quarter showed decreases from the third quarter of last year. This decline was symptomatic of the general recession in building, had only a remote connection with the severe slump in the stock market, which the third quarter figures antedated by several weeks. Sole actual deficit was registered by North American Cement, which lost more money this year than it did last. Steel continued to lead the earnings parade despite curtailed production.

For third quarter ending September 30:

	1937	1936
Alpha Portland Cement ³	353,184	645,646
American Radiator & Standard Sanitary ¹	6,537,000	4,544,000
American Rolling Mill	2,646,525	2,063,603
American Steel Foundries ⁴	3,562,637	1,849,069
American Window Glass ³	1,005,173	25,772
Bethlehem Steel ..	9,249,560	4,575,058
9 mo. Sept. 30. .	23,847,492	8,609,514
Certain-teed Products	133,529	131,208
Continental Steel ..	258,890	71,842
Electrolux	541,675	632,574
General Electric ..	13,370,327	9,941,343
Inland Steel	4,433,375	3,788,199
Johns-Manville ..	1,780,857	1,618,659
Keystone Steel & Wire	203,693	225,705
Lehigh Portland Cement ³	1,289,928	2,207,863
Libbey-Owens-Ford ..	3,216,690	2,266,988
Masonite ²	1,728,091	1,429,649
National Steel ..	5,227,071	3,359,704
Northern American Cement	484,828 D	320,565 D
Otis Elevator ¹ ..	3,475,478	1,657,295
Owens-Illinois ³ ..	10,844,607	9,641,996
Republic Steel ..	3,237,156	3,311,555
Revere Copper & Brass ¹	2,277,241	1,413,956
Sherwin-Williams ² ..	6,034,955	5,887,629
Tilo Roofing ⁴ ..	324,730	277,215
Truscon Steel	231,905	312,041
U. S. Gypsum	1,456,307	1,947,627
U. S. Steel	30,617,638	13,636,177
Universal-Cyclops ..	224,230	331,070 S
Yale & Towne	214,539	266,319
Youngstown Sheet & Tube	3,586,495	2,359,998

¹—9 months to Sept. 30

²—Year Aug. 31

³—12 months to Sept. 30

⁴—40 weeks to Oct. 9

S—Second quarter of 1937

D—Deficit

* Total of 145,000 houses for 1937 is for all cities over 2,500; total of 95,000 for 1938 is for 37 States on the smaller Dodge basis. Hence the large difference.



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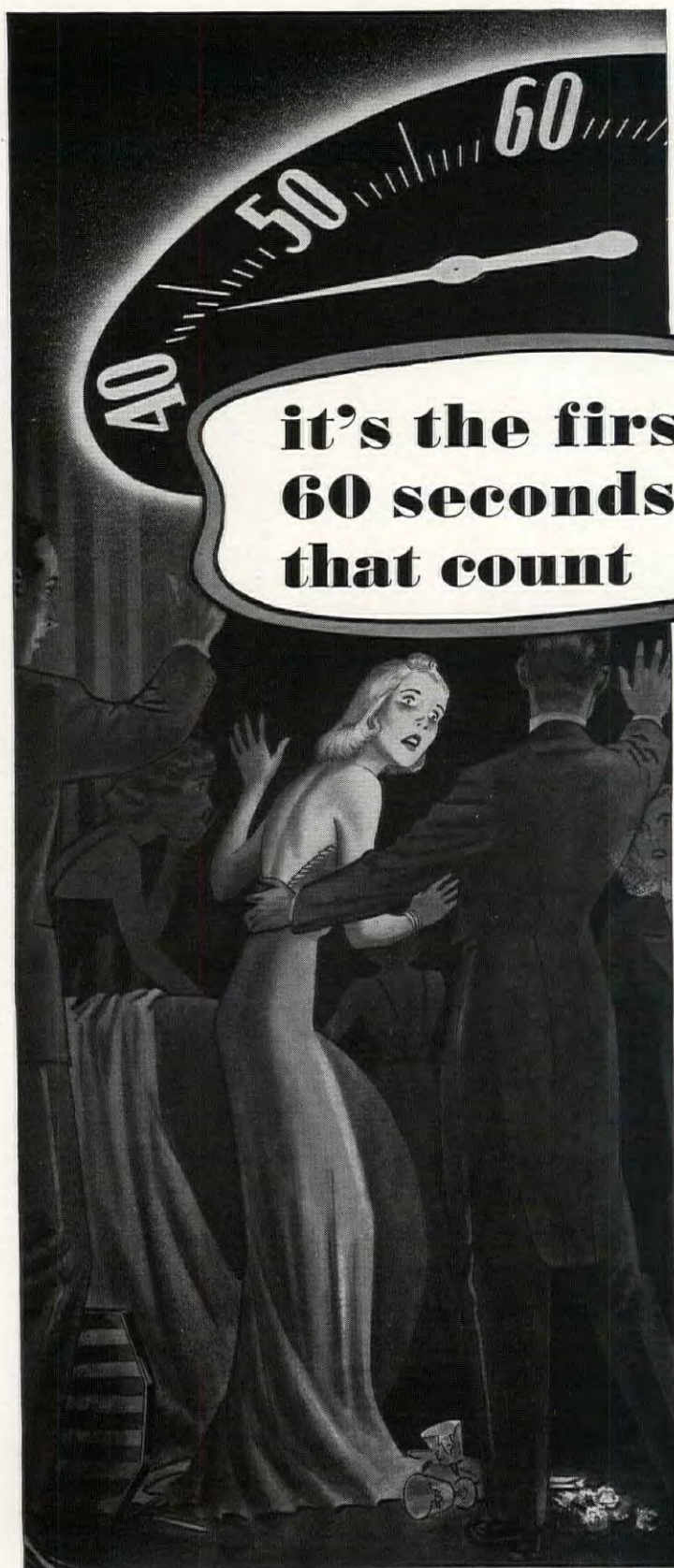
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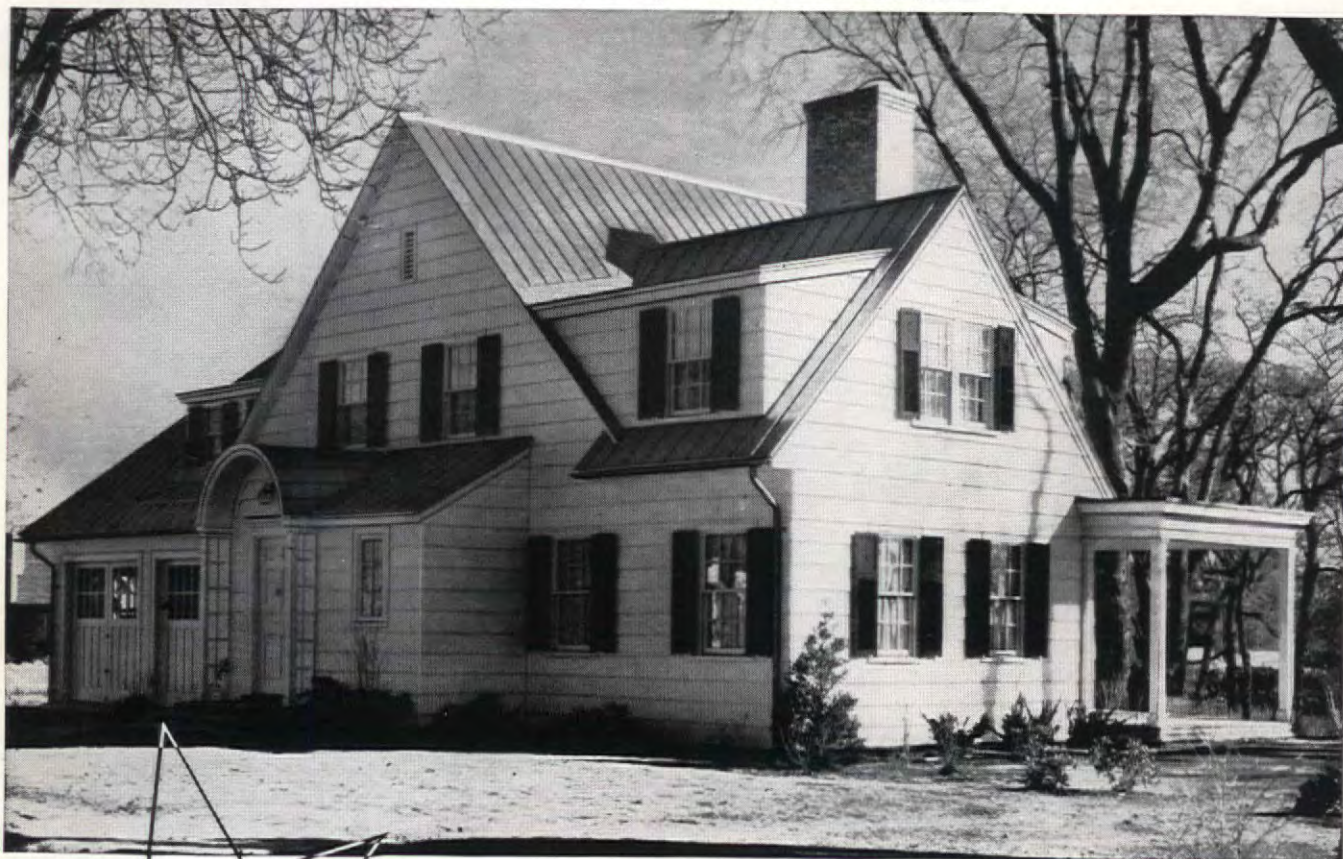
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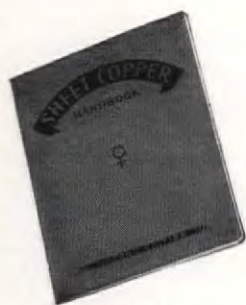
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Refer to Sweet's Catalogue, Section 27/1

Donald C. Goss, Architect, designed this home in Marblehead, Mass.



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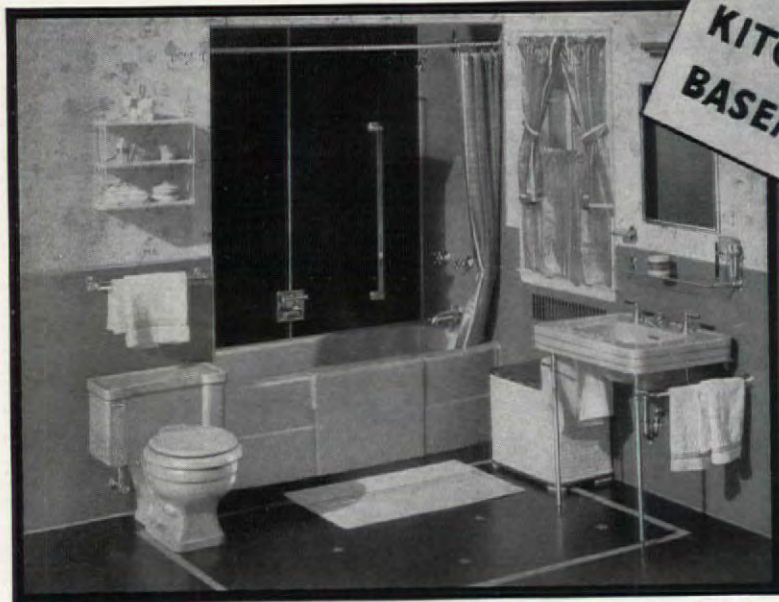


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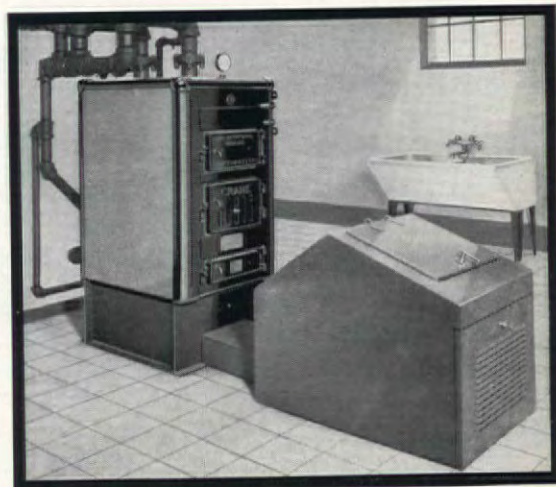
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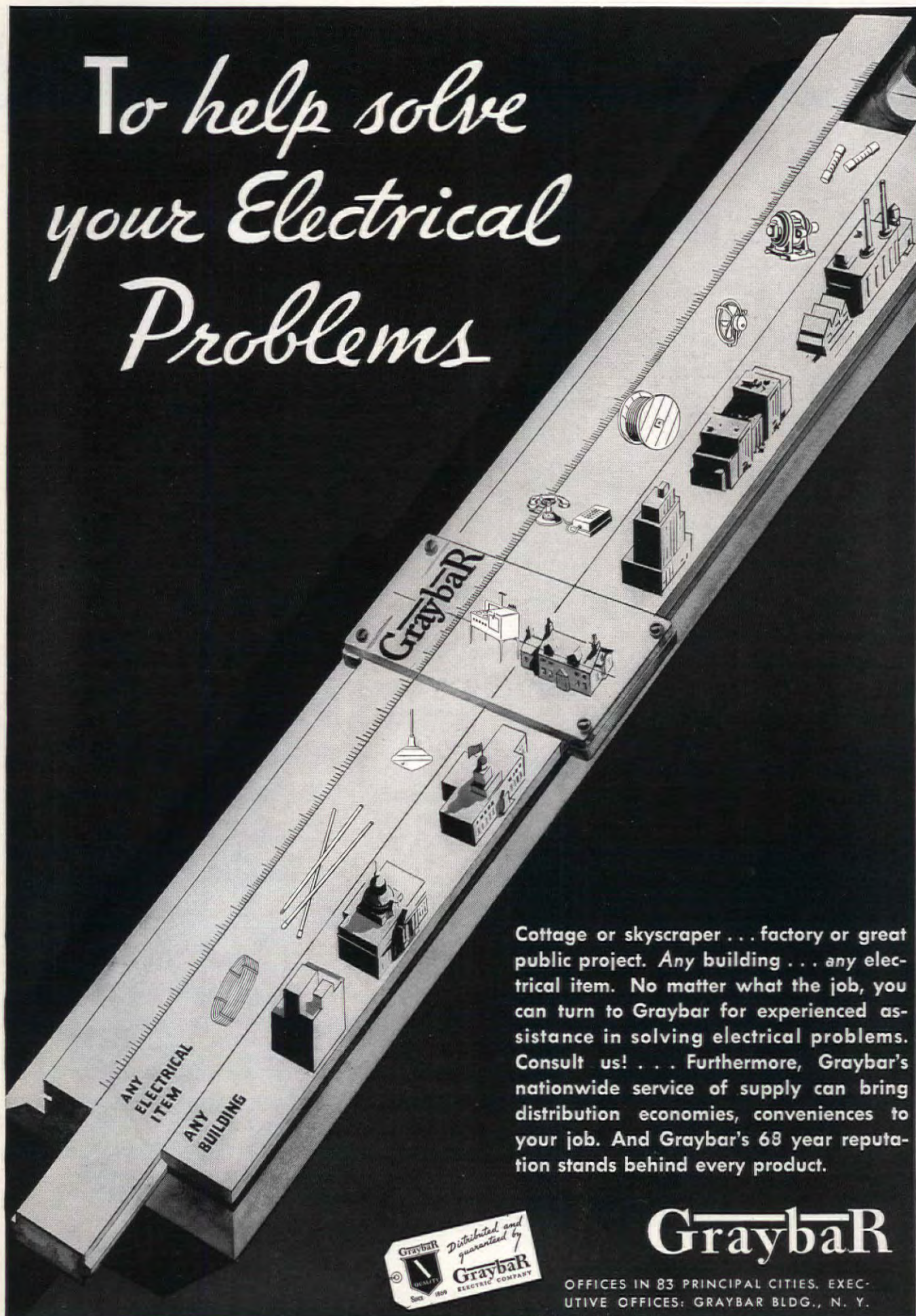


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FORUM OF EVENTS



Hedrich
FRANK LLOYD WRIGHT, at 68 the year's most inventive architect (page 64).



WILLIAM LESCAZE brought a modern school to staid New England (page 487).



D. D. Spellman
ALBERT KAHN designs 19 per cent of current U.S. industrial building (page 40).



ROBERT MOSES ran the world's fastest-growing park system still faster (page 12).



ROCKEFELLER CENTER, with 36 stories, was the year's highest (page 453).



THE INTEGRATED HOUSE, predicted in the FORUM, came true in Maryland (page 14).



Wm. L. Ford
DENVER HOSPITAL, by Burnham Hoyt, put modern therapy in a functional shell (Dec. 1936).



Bernard Hoffman
THREE-IN-ONE metal bathrooms were prefabricated by Buckminster ("Dymaxion") Fuller (page 14).

MEN AND DEEDS OF 1937

GOVERNMENT. Most potentially historic achievement of Building's 1937 was put together not on any vacant lot but in Washington's air conditioned committee rooms. After two years' struggle the Wagner-Steagall Housing Act, a tattered reminder of the original draft, was eventually yanked through both Houses, was the only one of the President's five MUST bills to reach his desk for signature. The President wanted the benefits but was afraid of the cost, eventually agreed to a scheduled appropriation of \$500 million over the next three years, just half of that originally asked but only one-fortieth of the total cost of a complete housing program as esti-



Wide World
SENATOR WAGNER won a MUST for housing from the President.

mated by Editor Irving Brant of the St. Louis *Star-Times*. (Feb.) More important than the actual achievement — which neatly and economically filled the President's desire for "a blueprint for the future"—were the tacit assumptions that the housing problem is here to stay and that it is the duty of the government to do something about it; only point in dispute was how much.

Meanwhile, the Federal Housing Administration continued to insure mortgages to the tune of more than \$350 million in nine months, has already become the government's most successful housing aid. Government muralists



Carl Mydans
HENRY B. STEAGALL, seconded Wagner's motion in the House.

again made the headlines. Rockwell Kent was accused of defiling the walls of Postmaster Farley's building in Washington by incorporating in his painting of a U.S. mailman delivering letters to the Puerto Ricans a minute piece of paper, inscribed in minuscule characters in an obscure Eskimo dialect, with a message which was apparently considered near treason when revealed to horrified officials. (Sept.) Muralist Reginald Marsh (whose Washington P.O. panels have been enthusiastically accepted), "keen as hell" to cover the dome in Manhattan's Custom House but balked by Federal grant paring, signed on as an Assistant Clerk at 90 cents an hour, severely undercut his normal fee of \$40,000 for a mural of this size. (Aug.) Government, state



Acme
ROCKWELL KENT quoted the Eskimos on revolt.

(Continued on page 12)

PROBLEM No. 10

IF YOU
REMODELED THIS



LIKE THIS



How would you plan up-to-date telephone arrangements?

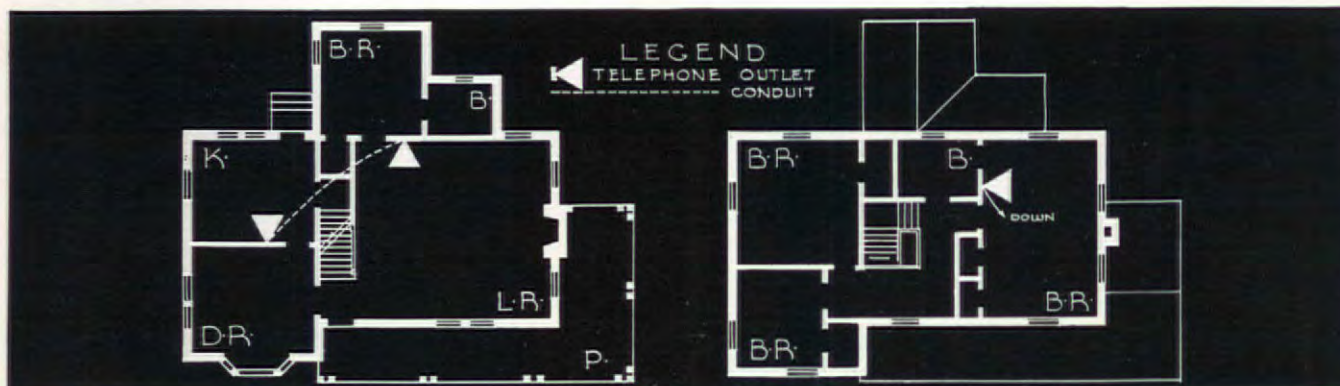
THIS old farmhouse can take on new form with very little new construction. And the relocation and refinishing of interior partitions allow for the installation of thoroughly modern telephone arrangements.

Built-in conduit or pipe can be run through the interior partitions before new finishes are applied, making it unnecessary to expose any telephone wiring. Outlets may be located on old or new baseboards, and their locations planned for both present and future telephone needs. A telephone connected to an outlet in the living

room will prove convenient for most calls, and do double duty for the first-floor bedroom. Another in the kitchen will insure against burned vegetables and boilings-over. And a telephone connected to the outlet in the second-floor master bedroom will offer protection at night and save stair-climbing many times a day.

• • •

This is a suggested solution to a typical problem. Telephone engineers will be glad to help you develop efficient, economical telephone plans for any projects. Call the local telephone office and ask for "Architects' Service."



FORUM OF EVENTS

(Continued from page 10)

and city taxes were also spent in more widely seen results. In rural areas the Resettlement Administration was completing an emasculated program of housing in the forms and materials which local opinion found most acceptable. Without prejudice they accepted building even in tamped mud, where labor was cheap and mud plentiful. In the cities PWA funds were busy, completed blocks of housing in 19 cities during the course of the year. Almost all completed projects were 100 per cent rented by year's end.



RESETTLEMENT Administration made mud pies for shelter.

New York's Mayor La Guardia and his ingenious Park Commissioner Moses, spending PWA funds, hurried to finish low-cost apartments (Williamsburg and Harlem), beaches (Jacob Riis), highways, parks and playgrounds (West Side highway, Central Park improvements), all of which mounted up to re-election in November. Tenement Commissioner Langdon Post made a less propitious attempt to enforce the Multiple Dwelling Law, found that he had forgotten to provide for the almost 4,000 tenants whose landlords immediately threatened eviction, so left still almost unenforced this eight-year-old act. (Jan.) New York's thirty-year-old Building Code, however, was eventually replaced by a new and progressive set of regulations. (Aug.) But Chicago's ten-year-old fight left the city fathers, temporarily engrossed with completing the Outer Drive, still unconvinced of the need for more than partial Code Revision.



Harris & Ewing
LANGDON POST tried to slumclear too fast.

CATASTROPHE. Conservative estimators put the 1937 flood damage bill at \$500,000,000, confirmed emotional writers' "greatest in history" verdict. Four hundred people were dead, more than the usual thousands homeless. (Feb.) With the help of cheap Government loans some of the mud-filled towns decided to pick up what remained of their possessions, move back into the foothills. Shawneetown, Ill., which once refused the village of Chicago a loan of \$1,000 because it was too far from

Shawneetown to ever amount to anything, staged a competition for the plan of their new town, awarded the prize to Landscape Architect Mrs. Mary Long Whitmore, persuaded WPA to spend up to \$3 million on its realization. Tiny Leavenworth, Ind. (pop. 350) netted the best borrower's terms of the year when Emil Bahr, retired executive of the Louisville Casket Co., offered free sites on his property above the river for schools, churches and people unable to buy lots, \$1 a month for others. Not flooded rivers but rainburst sewers brought death to 19 as a group of Staten Island slum tenements collapsed like a pile of matches, brought to the notice of prosperous New Yorkers the 1,100 condemned tenements which Philadelphia's energetic Mayor Wilson had tumbled into rubble since January 1 (Aug.) But queasy news readers had already been shaken by pictures of a huge hole in the ground littered with scraps of human flesh, clothes, desks, automobiles, all that was left of the prosperous London, Tex., school shattered by a blast of "wet" gas drawn from the rich oil fields upon which the building was perched. (March) By year's end the 455 dead in the Texas explosion began to sound like small talk to those following the Japanese invasion of China and the activities of European dictators, both of which were driving architecture along a strictly functional path in at least one class of building—the bombproof shelter. Even Buckingham Palace lost faith in its sandbagged roof and burrowed down amongst its sewer pipes to hollow out the latest in gasproof and bombproof cellars. In the U.S. only gold was so carefully guarded.

COSTS. While political sages differed in their estimates of exactly how far Europe was from the Brink of War, building's prophets were equally uncertain at year's end whether the U.S. was still on the Brink of a Boom. The monthly cost on the Federal Home Loan Bank Board's standard six-room house rose



Wide World
SHAWNEETOWN, ILL. rebuilt by flood and WPA on a prize plan.



A. Fellio
SLUM CLEARANCE by storm killed 19 in Staten Island tenements.



Associated Press
LONDON, TEX. lost 455 children in this hole.

steadily throughout the summer, in July reached above any so far recorded in the FHLBB's 18-months' existence with the highest absolute cost \$7,260 in Chicago. Yet Chicago Appraiser Nathan M. Ruben showed that his firm, Homes Inc., could build a six-room house for 23 per cent less than in 1929. And to confirm the Boom prognosticators some of their disciples decided that the moment had come to restart work on New York's chateau-headed Hampshire House, started in 1930 "to provide the charms of yesterday and the comforts of today." But the wishful realtor received no comfort from formerly successful Prophet Charles Gates Dawes, who predicted a stock market break in 1939, a realty depression in 1938 or earlier. ("How Long Prosperity?" May)

Spreading bids on large projects (it was rumored that New York World's Fair Administration Building drew bids varying by \$100,000 on a \$200,000 award) betrayed the builders' jittery feeling as material prices rose. Tantalizing enough were the big companies' profits. The Crane Co. multiplied theirs by five. The employees of the Trane Co. even turned in a part of their bonus to buy a half-page newspaper ad which shouted: "THANK YOU, MR. TRANE!" The National Association of Real Estate Boards hopefully hatched the Home Builders' Guild, an idea popularly credited to Executive Secretary Herbert U. Nelson. Designed to offset rising costs by mass buying, it would also encourage standardization, possibly even in spite of itself. (May) But it was left to London, England to enforce the standards scheme often outlined but always jealously avoided here.

Glasgow, Scotland, suggested an aspirin for another of building's current headaches, the shortage of labor, by guaranteeing building trades mechanics 51 weeks of work per year, together with payment of wages for time lost through bad weather or other causes outside the men's control. Without such inducements the National Association of Building Trades Employers' investigation found that "a skilled labor shortage cannot be averted." A New York builder advertised in the papers for men, could



Int. News
GENERAL DAWES saw a crash in 1939.



HERBERT U. NELSON, NAREB's secretary, gave builders a Guild.

(Continued on page 14)



BUILDINGS NEVER "SHOW THEIR AGE"
WHEN PROTECTED WITH *Driwal*



U. S. Naval Reserve Armory
Toledo, Ohio

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surface and combining with the impurities to set up discoloration. As a natural corollary, it seals the surface against the accumulation of dirt and grime.

Why not let Driwal keep your buildings looking new? It is also excellent for old buildings that have been freshly cleaned. Complete specifications will be found in Sweet's Catalog or will be gladly sent upon request.

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ADDRESS

INDIVIDUAL



FORUM OF EVENTS

(Continued from page 12)

not find enough. The American Federation of Labor unemployment figures by June were down to 21 per cent. And the upping of union wage rates—in some cases above 1929 levels—made the builder's already uncomfortable seat more so. It was little consolation for him that the Labor Dept. survey showed that union wages were universally and substantially above non-union wages. More significant to him was the 99 cents an hour earned by 46.9 per cent of building's workers, the 74 cents earned by 65.5 per cent.

Building managers discovered that by using a back and forth motion instead of a circular one, a cleaning woman could cut the time necessary for dusting a given number of desks from 161 seconds to 122. Building owners discovered that not only had rents failed to keep pace with the rise in costs, but that tenants had developed an alarming belligerence, were taking example from current disputes between capital and labor. In Pontiac, Mich. a rent strike was called by the United Automobile Workers of America when they considered that the landlords were jumping rents faster than was justifiable in view of real wages. (June) In Los Angeles the idea burgeoned under the most respectable auspices, and in New York Tenement Commissioner Langdon Post reassured tenants and shocked landlords by claiming it as the tenants' duty to organize into unions. (July) The successful city-wide rent-raise by Seattle's well-organized apartment house owners was exceptional, and as building permits slumped below the expected midsummer rise to a July low of \$135 million, it became obvious that it was not the facilities but the reasons for building which were lacking.

IDEAS. That "Pay for it just like rent" is the most potent line for the subdivider's copywriter was proved by a special FORUM survey of the "under-\$5,000-house" market which showed that *Like feeling of ownership* was the greatest urge to own, *Price too high* the greatest deterrent. Further evidence for salesmen came from Erwin, Wasey who, in selling homes to Philadelphians through advertisements, found the strongest puller in the series a toothy damsel cap-

tioned "There's a song in her heart," which apparently better stimulated the urge to own than a sausage-curved baby titled "Born Lucky". (July) That they couldn't afford to satisfy that urge was the wail of 4,000 Detroiters who complained that 20 per cent was too heavy a down payment. That they couldn't afford to build was the verdict of 181 Detroit builders when faced with a wage rise demand. So they staged a lockout which dropped residential permits from 112 to 6 in a single week. Meanwhile building labor still earned too little (according to the Labor Housing Conference) to buy what it built. Not that credit was dear. The FHA's 80 per cent was topped by the 90 per cent offer of ambitious Chicago subdivider Robert Bartlett, sternly opposed by the conservative Mortgage Bankers Association. It was rumored that nevertheless FHA would ask powers for a 10 per cent down payment in the next session of Congress.

The \$2,500-for-house-and-lot ideal was eventually achieved on Long Island under the canny direction of Frank J. Fox's Realty Associates, and National Lumber Manufacturers Association earned a plaque, a lot of publicity, and a certain amount of profit for their members by a successful small house program. Publicity-wise NLMA already threatens "Price Tag Homes of 1938," each to sell at less than \$5,000. That such offers will force the conventional Home Show to a drastic refurbishing was demonstrated by the failure of Madison Square Garden's "Million Dollar Home Show" to rate a single line in either the *Times* or the *Herald Tribune* on opening day, despite Harrison & Fouilhoux's \$40,000 "House of Tomorrow," which later won a mention in the Pittsburgh Glass Competition. (July)

Subdividers managed to beat rising costs by smart merchandising. A small, smart New York builder, N. K. Winston, was the first to start exploiting the rich virgin market which industry's migration has created in the South. Realtor Charles I. Clapp and Architect Philip S. Graham dared to break into exclusive Westport, Conn., with the unfinished second story. Harry Pople of Pittsburgh, Pa. had his Swan Acres subdivision well on the way to success because of the restriction "Homes all to be modern in design."



Guraway Co.
\$2,500 bought one house
and lot on Long Is-
land.



Int. News
RENT STRIKERS picket-
ed in Manhattan, in
Pontiac, and in Los
Angeles.



Randt
\$40,000 could not buy
the "House of Tomor-
row."

But New York's Metropolitan Museum refused to tolerate any modern intrusion on their Munsey Park lots, and just to show that all was really as it always has been, Burke Harmon started to build again, this time a Colonial Village in Chicago. Ex-Taxi Tycoon Allie Freed, with a million dollars in his pocket and million dollar corporations in his head, set his enterprising mind to the building of Paramount Communities just across the Potomac from Washington, hired topflight Planner Aone Focke ("Allan")



CHATEAU d'ABOND-
ANCE led chateaux out
of the shadows for Pre-
views, Inc.

Kamstra to supervise the layout, which is to center round a core of buildings to rent. And just to confirm the rumored Boom, Previews

FABRICATION. All these notions, by and large, were aimed at getting rid of houses faster and at a better price. The houses themselves still consisted of some 30,000 parts, most of which were still fastened together on the site. The prefabricators were still busy in their scattered workshops and laboratories: there were still as few people who could afford to buy a prefabricated house. But experiment turned up at least these new types: the house factory-tailored in Homasote to the architect's specifications, the monolithic house completed in the factory and then trucked or floated to the site, the Harnischfeger panel house which is currently ringing up the largest sales, Foster Gunnison's plywood cottage priced at less than \$3,000, and Buckminster Fuller's most compact prefabricated bathroom with everything combined in two stampings.



LE TOURNEAU house-
factory brings it forth
whole on wheels.

The Integrated House, initially proposed in the April FORUM, made its first three-dimensional appearance in Silver Spring, Md., aimed at low cost by a factory-like (though not necessarily factory-assembled) precision in the building, looked more immediately promising than the prefabricators' more radical theories. And the trailer manufacturers defiantly began to cut direct into low-cost housing by producing "cottages on wheels," although AMA, APWA, ASPO and NAHO had held hands and bravely stated: "The

(Continued on page 64)



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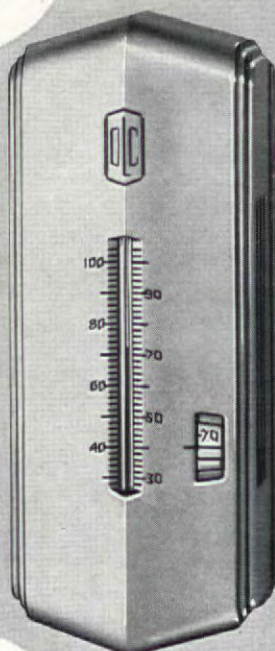
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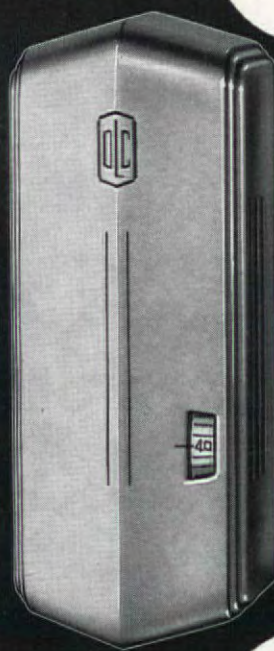
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From ugly building to appetizing cafe—with the help of Atlas White stucco. DiPinto's Cafe is located on Torresdale Ave., near Frankford Ave., Philadelphia. Owner and general contractor, A. Ferraco. Plastering contractor, A. Bonbano—both of Philadelphia. Light buff colored exterior stucco furnished by Penn-Crete Products Co., Philadelphia.

Look again— *It's the same Building!*



Another example of how exterior stucco of Atlas White portland cement helps transform "eyesores" into handsome, profitable buildings

● Really amazing—the remodeling magic that's accomplished with exterior stucco of Atlas White portland cement.

On the job shown here, metal reinforcing was placed over the old brick walls, then three coats of stucco, with a finish coat of Penn-Crete light buff. Atlas Gray cement was used for the base coats.

When you are figuring on a remodeling job, remember these facts:

1. White portland cement stucco gives a building a fresh, bright and permanent exterior.

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PROFIT *by studying displays like these*



A few exhibits at 4th International Heating & Ventilating Exposition

ARCHITECTS - ENGINEERS - TECHNICAL MEN
... concerned primarily with the problems of design and specifications, are looking forward to an important forthcoming event—the Fifth International Heating and Ventilating—AIR CONDITIONING—Exposition, during the week of January 24, 1938.

Thousands of men will welcome this timely opportunity of studying the impressive displays of 300 leading manufacturers—seeing demonstrations of the latest equipment designed to meet the requirements of modern living and working conditions, and industrial operations.

You and your associates should certainly attend

The Air Conditioning Exposition
5th INTERNATIONAL HEATING & VENTILATING EXPOSITION
GRAND CENTRAL PALACE JANUARY 24 - 28, 1938 NEW YORK, N. Y.

MANAGED BY THE INTERNATIONAL EXPOSITION COMPANY



Held under the auspices of
American Society of Heating &
Ventilating Engineers

Up with the Times

...and in step with Tradition



An interior that makes effective use of walnut paneling in figured veneers, cathedral matched. It is the private office of Dr. Morris Fishbein, director of the American Medical Association. Architects: Holabird and Root, Chicago, Ill.

MANY an architect is today faced with that vague but exacting demand of clients to give them "something modern but not too modern."

And many an architect has found that the use of American Walnut for paneling or woodwork provides that transitional element which satisfies the desires of people who want to be up to the minute yet in step with standards of taste that are strongly traditional.

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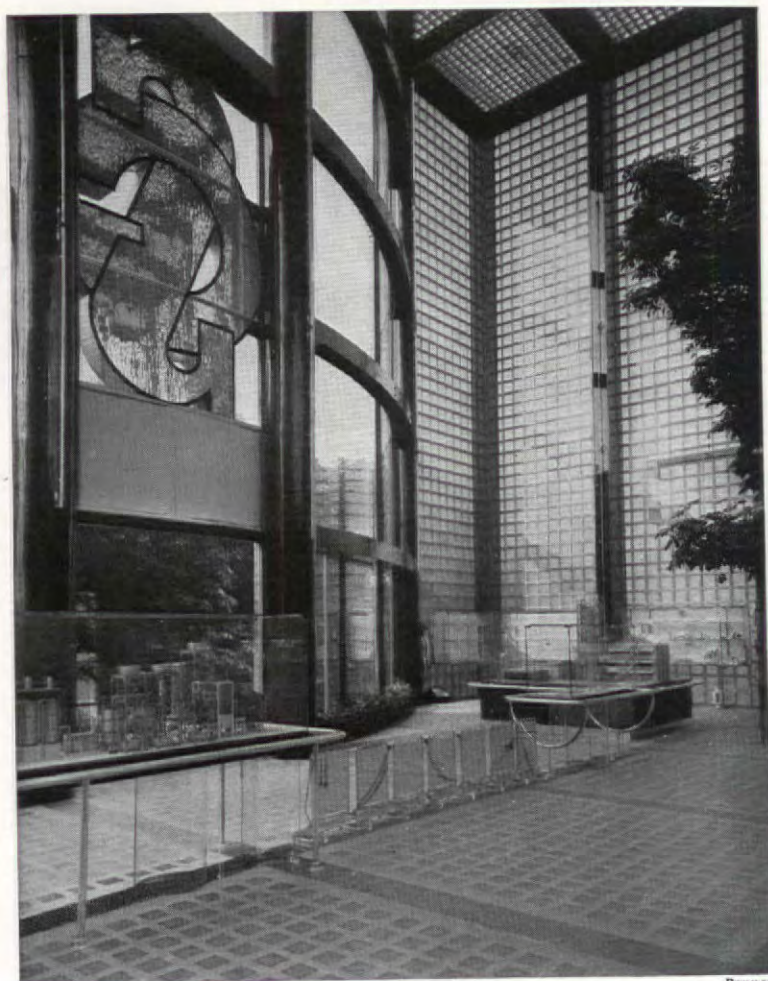
in the pattern it makes on large wall surfaces. It's a wood that permits a wide range of color selection from the deep, warm brown of tradition to the newest blonde finishes. And it's a wood that responds to a variety of artistic treatments.

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PRODUCTS AND PRACTICE



GLASS PAVILION, Paris Exposition, Saint-Gobain Glass Co.
Glass is used throughout. Additional pictures on page 22

NEW GLASS PRODUCTS

Glass has long been one of the most used and least understood of building materials. Employed extensively in building since Roman times, glass and glass manufacture were for centuries shrouded in secrecy and governed by rule-of-thumb. This tradition of mystery became so deep-rooted that even at the present time most architects know relatively little about this important building material.

Within the past twenty or thirty years, however, glass manufacture has been transformed from an art into an exact science; from a handicraft into a mechanized industry. The spirit of the days when all the glass factories were moved to a closely guarded Mediterranean island and glass workers kept virtual prisoners is definitely gone; replaced by an era of intensive scientific research and experiment, with resulting discoveries pooled by glass makers all over the world.

For the building industry, which uses something like one-third of total glass production, the knowledge thus acquired has borne fruit firstly in glasses of better quality at no extra cost, and secondly in numerous new

glasses and glass products especially designed to fill certain building needs.

It is not simply the discovery of new glasses and new glass products which makes glass current building news, but rather the fact that within the past two or three years many of these developments have for the first time been made available commercially. Whether because of the recent and instantaneous success of the glass building block or because of modern architecture's increasing popularity, the fact remains that the glass industry has become building minded, and new glass products have lately been coming on the market with almost bewildering rapidity. Simultaneously with the glass block, the introduction of heat-treated, heat-absorbing, and other special glasses, the commercial production of glass fiber insulation and air filters, the development of new methods for utilizing structural glass, and the increased use of sculptured glass for decorative purposes and in lighting combine to make the subject of glass in building one worthy of review and study.

(Continued on page 22)

Speaking of HOUSING Projects— HERE'S OUR SCORE!

22 Jobs . . .

134,400 ft. of Ric-wiL!

Over 25 Miles of Conduit

A SCORE that's more than a score! 22 Government-sponsored housing projects include, as part of their central heating facilities, steam lines with underground "housing" of Ric-wiL Conduit. Some of these projects are shown here. These jobs represent a total footage of 134,400 lineal feet of Ric-wiL Conduit, an amount far in excess of the combined footage of *all* other competitive conduit systems used on Government group housing. This record is impressive evidence of the comparative merits of all Underground Conduit Systems.

Such approval is convincing testimony, not only as to the superiority of Ric-wiL Systems, but also the adequate manufacturing facilities and smooth-functioning service of the Ric-wiL organization. From the point of view of any architect, such a service is invaluable in simplifying *his* problems on underground conduit.

▶ Visit the Ric-wiL Exhibit at the New York Heating and Ventilating Exposition, January 24-28.

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PRODUCTS AND PRACTICE



Bonney

"THERMOLUX" GLASS MURAL, Italian Building, Paris Exposition. "Thermolux" is a European product consisting of glass cover plates between which is sandwiched a layer of glass threads, providing light diffusion and temperature insulation



FLORAL CONSERVATORY, Forest Park, St. Louis. This structure contains 16,600 sq. ft. of double strength Libbey-Owens-Ford plate glass, is 186 ft. long, 55 ft. wide, and 55 ft. high. Glass panes are 24 by 26 in.



Bonney Photos



Exterior of Glass Pavilion at Paris Exposition. Insert shows underside of glass stairway

HEAT ABSORBING GLASS

Developed especially for use in industrial and air conditioned buildings, heat absorbing glass is designed to reduce transmission of solar or radiant heat through glazed areas without noticeable sacrifice of light. The various glasses of this type now available vary in color from a scarcely perceptible greenish-blue to a definitely blue-green, and exclude, in single-glazed installations, from about 25 to 75 per cent of the heat in sunlight, as compared with about 10 per cent for ordinary glass. Glass of the lighter color, used as double-glazing with ordinary glass, shuts out more than 45 per cent of the radiant heat.

Such glass is available in $\frac{1}{8}$ in. and $\frac{1}{4}$ in. thickness, plain or wired, and with polished, ribbed, or hammered surfaces, in standard sizes. Transmission of visible light through the glass ranges from about 58 per cent in the darker color to about 75 per cent in the lighter.

SCULPTURED GLASS

Glass sculpture is by no means new, but the extensive application of this medium to architecture is a development largely of the past few years. Sculptured glass may be transparent, translucent, or opaque; cast, cut, or sand blasted. The outstanding installation of sculptured glass, in the lobby of the R.C.A. Building, Rockefeller Center, consists of a sculptured panel by Lee Lawrie, 55 x 115 ft., composed of 240 cast, rectangular glass blocks, 18 x 28 in., and weighing 70 to 115 lbs. each. Joints are transparent cement and the panel is reinforced with steel bars behind the vertical joints.

In the manufacture of architectural sculptured glass, models are prepared from the architect's drawings—oversize to compensate for shrinkage ($\frac{1}{8}$ in. to the foot), a cast iron mold made from the model, and the glass pressed or blown into the mold by hand in a semi-molten state. After cooling, the glass comes out in clear glass or clear color, which may be finished to give various effects. The maximum area which can be cast is about equal to that of a 20 in. square, thickness depending on the size of the pieces. Finished units weigh about 9 lbs. per square foot depending on thickness. Decoration may be on front or back side, finish may be clear glass from the mold, clear glass polished, translucent satin, or satin—highlighted.

(Continued on page 24)

It's SMART...and it's THRIFTY too!

For decorative or working surfaces in any room in the house, MICARTA brings that much-desired combination of smartness and long-time thrift. The beautiful colors, in plain or decorative patterns, give a permanent air of good taste . . . of charm and dignity. And the dense hard surface, practically immune against scratches, dents, burns, or alcohol, can be kept spotlessly brilliant, with very little effort. This eliminates frequent refinishing or replacing, reduces cleaning time and cost.

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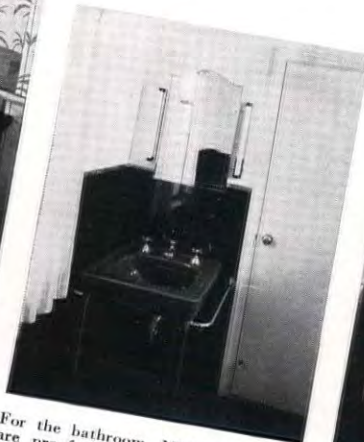
Distinctive, indeed, is this smart living room, with mantel and bookshelf base of gleaming black MICARTA.



Bisque and blue MICARTA walls make this kitchen attractive, and MICARTA for tops of work table and sink require only a moment for cleaning.



And for the Rumpus Room, what is more practical than a bar top that alcohol won't hurt, and that cigarettes won't burn . . . and that rough usage won't damage!



For the bathroom, MICARTA walls are proof against moisture and hot steam. Beautiful—and most thrifty of energy required for cleaning.



This restful room uses curly maple MICARTA paneling for the lower part of the walls, relieved by bisque MICARTA for the upper part.

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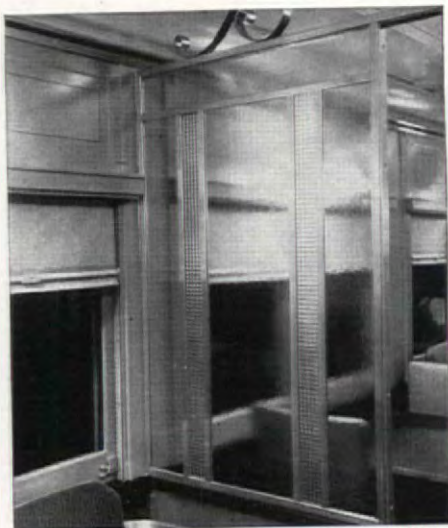
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PRODUCTS AND PRACTICE



Waldman

Glass partition in railway car. Pittsburgh Plate Glass Co.'s 3/16 in. "Hy-lite" and "Magnalite-A" with Revecon Structural Sections



Robert Y. Ritchie

Glass block panel with drapery woven from glass-fiber yard. Pittsburgh-Corning Corp.



Piaget

Dining room with Owens-Illinois "Insulux" glass block



All-glass store front: sign, opaque and translucent "Vitrolux"—color-fused, tempered plate glass; decorated panels, "Vitrolite"; bulkhead black glass, sandblasted. Libbey-Owens-Ford Glass Co.

"TEMPERED" OR HEAT-TREATED GLASS

Intended for use wherever glass is subject to impact, sudden changes in temperature, or severe strain, tempered glass for building is available in both glazing and structural glass forms. It is flexible, resilient, about five times stronger than ordinary glass, can be bent or twisted 20° out of plane, and is not harmed by sudden temperature shifts. If finally shattered by severe impact, it does not fly into jagged slivers but crumbles harmlessly into small bits.

Tempered glass is made from ordinary glass by a process not unlike that by which steel is case-hardened. The glass to be tempered is first heated to a cherry red (about 1200° F.) in an electric furnace, then abruptly and uniformly chilled by blasts of air. The surface of the glass, cooling faster than the inside, hardens before the inside has cooled. On complete cooling, the contraction of the inside of the sheet compresses the previously hardened outside surfaces, while the resistance of the outside shell to this compression puts the interior of the sheet into lateral tension. From this tension within its interior the processed glass derives its flexibility, and from the compression of the surfaces its hardness and resistance to impact.

Application of the product to many new fields, particularly that of luminous architecture, is further enhanced by the fact that it is available in a wide variety of brilliant colors fused on the surface of the glass simultaneously with the strengthening process.

One of the disadvantages of the new material is the fact that it must be made to order, since it is impossible to cut it to size after tempering. Another is the fact that any injury sufficient to penetrate the surface of the glass at any point will cause the entire sheet to disintegrate.

Clear tempered glass is available in sheets up to 48 x 128 in. The most noteworthy examples of its application so far are in the portholes of ocean liners, which have been reduced in thickness and weight about one-third through the use of the new material, and in luminous architecture.

LAMINATED SAFETY GLASS

Laminated safety glass consists of two or more sheets of glass separated by a transparent cellulose plastic and bonded together with cement under heat and pressure. It depends for its safety features upon the plastic filler, which lends the element of extensibility and materially reduces the tendency of the

(Continued on page 26)

FIRST CAME STEEL... *then* COP-R-LOY



Your Plumber is Your Friend... the craftsman who wields the wrench as well as the Master Plumber who guides your selection of materials. Both will tell you there is extra protection and extra economy for your plumbing and heating system in the greater durability of COP-R-LOY Pipe, made of a famous metal especially compounded to combat rust and corrosion. Builders, engineers and industrial users have tested the endurance of COP-R-LOY Pipe and select it for important projects where corrosive elements are of the severest and *where service must not fail*. Winter time is usually trouble time for pipe. Avoid pipe ills by consulting your plumber on necessary repairs. As an expert who knows materials and as a business man who values your good will, he will recommend COP-R-LOY Pipe for the *better* and *longer* service it will deliver to you. Your plumber's service is backed by that of leading distributors who carry complete stocks of Wheeling Steel Pipe and COP-R-LOY Pipe. It's Wheeling Steel.



Copyright 1937, by Wheeling Steel Corporation, Wheeling, West Va.

COP-R-LOY IT'S WHEELING STEEL

Reg. U.S. Pat. Off.

This advertisement appeared in National Magazines during November

PRODUCTS AND PRACTICE



MANUFACTURE of glass fiber insulation, Corning Glass Works



Duncan Photos

INSTALLATION of glass fiber insulation in "bat" form. Insulation shown in this picture and in the picture below made by the Owens-Illinois Glass Co., distributed by the United States Gypsum Co.



Nodulated glass fiber insulation is blown between joists and studs in the regular manner, particularly adapted to existing buildings

glass cover plates to fly and scatter. It is somewhat stronger than ordinary glass of the same thickness, and under sudden impact will sustain from 8 to 10 times greater strain.

While glass of this type has been used in insane asylums and in high towers to avoid the danger of flying glass, the newer tempered glass is now generally recommended for this type of use. Application of laminated safety glass to building is now largely restricted to bullet resisting installations. Bullet resisting laminated safety glass consists of multiple (3 or more, generally 5) layers of plate glass laminated with sheets of flexible plastic. The center, or core sheet is usually made thicker than the other layers. Such glass is available $\frac{7}{8}$ to $1\frac{1}{4}$ in. thick, the $\frac{9}{8}$ in. thickness having been approved by Underwriters' Laboratories as bullet resisting.

GLASS BLOCK

The recent and phenomenal success of glass masonry is due primarily to marked improvement of the product resulting from changes in manufacturing methods made within the past two or three years. At the time of their introduction in this country, glass block were made in two ways, neither of which was entirely satisfactory. By the first method, the units were blown in one piece like bottles, the hollow center of the block later partially evacuated and sealed off. By the second method, units were made in two pressed parts, a box and a lid. The first method was costly, and the size block which could be made in this way limited and too small to be entirely practicable. The second method produced a larger and cheaper block, but no satisfactory method of sealing it so as to keep out moisture and prevent condensation on the inside of the block could be found.

Perfection of the glass masonry unit awaited the discovery of a method which would permit proper sealing. Such a method was discovered in the form of a fusing process not unlike welding, and glass block are today almost universally made from symmetrical, boxlike halves welded together in this way under intense heat. The heat sets up a partial vacuum and removes all of the moisture from the air contained in the block. Units of this type are lighter and stronger, contain less glass, conduct less heat. And assembly of the block in two pieces permits marking the *inside* surfaces with light diffusing patterns where they do not complicate the cleaning problem.

(Continued on page 76)

New Glass and new Metal



The "Modern Shopping Center" erected by Chevrolet at the New York and Chicago Automobile Shows. L-O-F products were used exclusively.

FOR NEW TRENDS IN storefront architecture

● Today, one of the most noticeable trends in modern commercial construction is the increased use of glass in storefronts and building exteriors. Modern merchandising demands the transformation of drab, uninteresting, uninviting fronts into areas that appeal with color and light—that compel attention and invite entrance.

Glass has long contributed its remarkable utility and beauty to every type of construction. And NOW new kinds of glass appealing to the eye, advanced in smartness are practical for use as a part of the structure itself. Vitrolite, the Colorful Structural Glass is one. Another, Vitrolux Color Fused Tempered Plate Glass, is the ONLY glass that combines ALL of the characteristics essential for practical and effective luminous storefronts. For Vitrolux—with colors fire-fused to become an integral part of the glass—offers unusual resistance

to thermal shock and is not affected by rain or snow coming in contact with the warmed surface of the lighted glass area.

And for the first time Libbey-Owens-Ford Glass Company now offers EVERY material required in the construction of the modern storefront—permanent materials that outlive the structure itself and are unexcelled in ease of maintenance. Write TODAY for information on L-O-F Storefronts. Complete technical, installation and lighting data are available. LIBBEY-OWENS-FORD GLASS COMPANY, TOLEDO, OHIO

LIBBEY · OWENS · FORD

Complete Storefronts

L-O-F STOREFRONT MATERIALS



Vitrolux—Color Fused Tempered Plate Glass; Vitrolite—Colorful Opaque Structural Glass; Polished Plate Glass; Aklo Heat-Absorbing Plate Glass; Blue Ridge Figured and Wire Glass; Extrudalite—Revolutionary Line of Metal For Storefront Construction.

AIR^N

HEATING AND AIR CONDITIONING TO THE *Nth* DEGREE

Serving

**HEATING AND AIR CONDITIONING
FROM 70 OFFICES IN THE UNITED STATES**

Architects, engineers, and contractors will find within the Trane organization the answer to all their equipment and service requirements

A staff of specially trained technical men at each office.

Equipment that meets every requirement whether in a giant industry or a small home.

A record of notable installations the world over.

Training Air—to heat it, to cool it, to cleanse, humidify and to dehumidify it, to improve ventilation.

Summing it all up—Trane Related Units make possible the *Nth* degree in Heating and Air Conditioning. The Trane Company, 2000 Cameron Avenue, La Crosse, Wis.

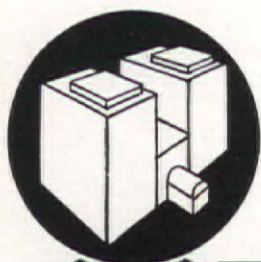
T H E T R A N E C O M P A N Y

ALSO TRANE COMPANY OF



TRANE

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HEATING SPECIALTIES AND
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COMFORT AND PROCESS
AIR CONDITIONERS



UNIT HEATERS AND
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EVAPORATIVE CONDENSERS
AND PUMPS



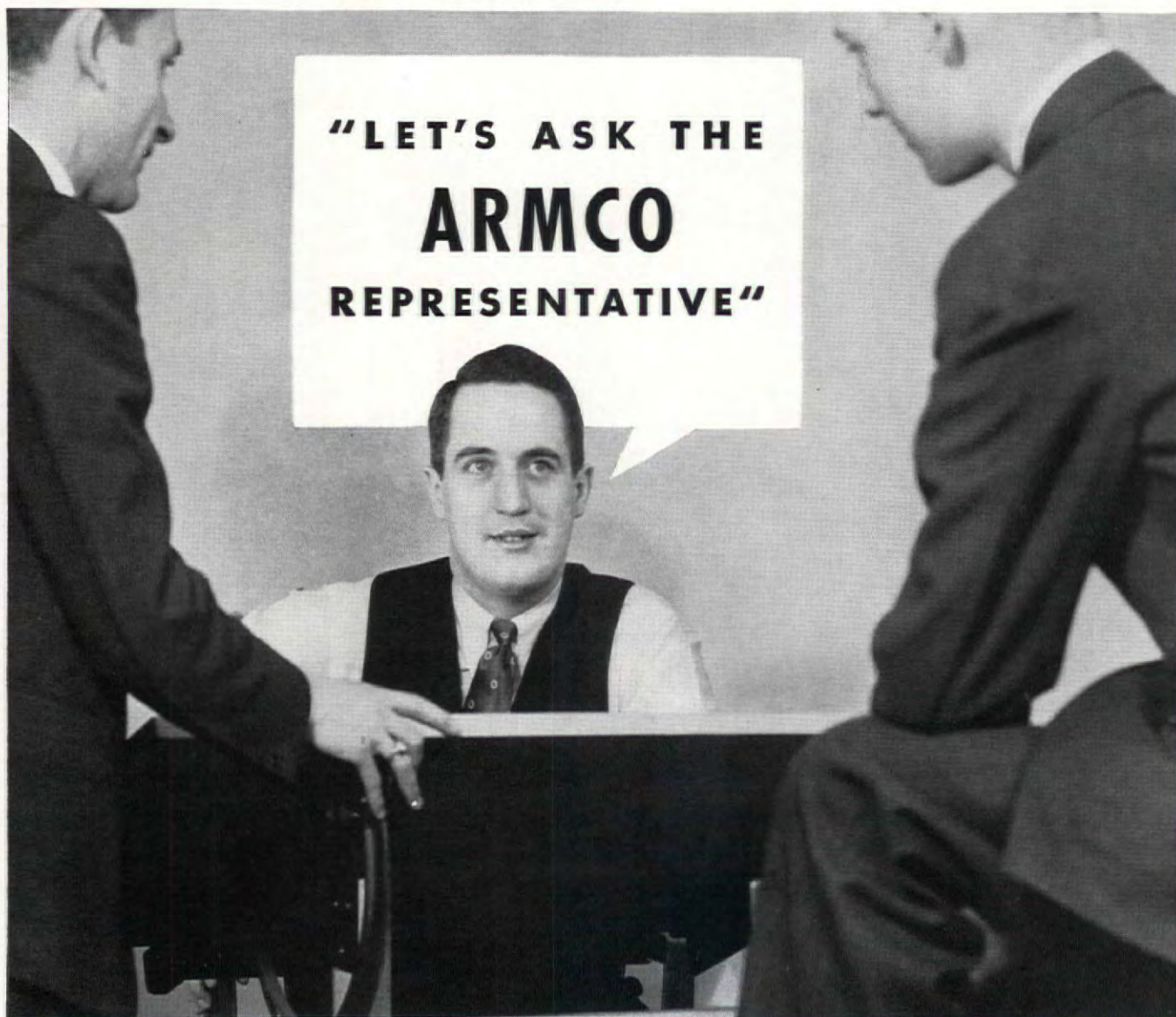
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AND COOLING COILS



is a symbol used exclusively by
TRANE to signify the Nth degree of excel-
lence in Heating, Cooling, and Air Condi-
tioning equipment.

LACROSSE, WISCONSIN

CANADA LTD., TORONTO, ONT.



**"LET'S ASK THE
ARMCO
REPRESENTATIVE"**

• Writing sheet metal into specifications is one thing. Knowing where to obtain the right sizes, gages, surface finishes in the right analyses, and how to get job deliveries on time, is often another.

Overcoming this difficulty is one way in which the ARMCO representative can be of

service to you. He knows what sheets the ARMCO distributors carry in stock—Galvanized Ingot Iron Sheet, Galvanized Paintgrip Sheet, regular galvanized, enameling iron or stainless steel.

If your problem goes deeper than this, the ARMCO man has back of him—ready to respond to instant call—all of the vast

metallurgical and producing experience of the great ARMCO laboratories and mills.

Put the ARMCO representative on your consulting staff. Feel free to call on him at any time. If you do not have his name, address and telephone number, write us. The American Rolling Mill Co., Executive Offices, Middletown, Ohio.



ARMCO SHEET METALS A GRADE FOR EVERY NEED

FOR IDEAL
Air Conditions
NO OVERHEATING • NO DRAFTS...



THE NEW HERMAN NELSON AIR CONDITIONER FOR SCHOOLS

The advanced design of the New Herman Nelson Air Conditioner for Schools maintains proper air conditions in the schoolroom—eliminating overheating and preventing drafts.

Herman Nelson's exclusive "draw-through" design assures that *all* the air discharged into the room is maintained at the desired outlet temperature. With the blower assembly located in the top compartment, streams of air at various temperatures drawn through the unit are thoroughly mixed in the fans immediately before being discharged into the room. *No* part of the air is colder or hotter than necessary to maintain the desired temperature. Only with this "draw-through" multi-fan design can air, cool enough to prevent overheating, be discharged into the classroom without danger of drafts.

For full information write to

THE HERMAN NELSON CORPORATION, MOLINE, ILLINOIS

The Utmost
IN QUIET OPERATION

Most quiet operation is assured with the New Herman Nelson Air Conditioner for Schools because of its scientific design. Locating the motor in the end compartment—out of the air stream—permits the use of larger blower assemblies, with fans running at slower tip speeds. This new design of the Herman Nelson unit now assures quiet operation at full capacity.



THE HERMAN NELSON
WAY

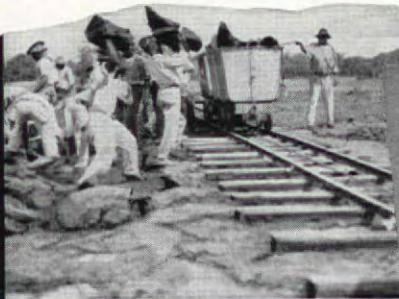


THE OBSOLETE
WAY

THE HERMAN NELSON CORPORATION
MOLINE, ILLINOIS



The Vital Element -



THE VITAL ELEMENT, dug from the lake



transported on natives' heads



and across a half-mile cableway



to ships for the United States



Stevens Hotel, Chicago, Ill.
to make Barber Genasco Bonded Roofings

THE MOST FASCINATING STORY
IN THE *Roofing* INDUSTRY

BARBER brings the architect a story of quality seldom equaled in roofing history. It is the story of a great natural asphalt—*The Vital Element*—made by Nature on the southern Caribbean Island of Trinidad. It is a story that is exclusively Barber's, applying only to Barber Genasco Roofings—and no others!

Trinidad Lake Asphalt—*The Vital Element*—was discovered by Christopher Columbus. Sir Walter Raleigh used it to caulk his leaky ships. And Barber has spent many years using it in the highest quality roofings.

What is the secret of *The Vital Element*? First, it is a native asphalt, made through countless generations at only tropical temperatures. Second, it possesses an inherent vitality that has never been deadened—even after millions of years of exposure to a year-round summer sun. Third, it contains a colloidal suspension of fine volcanic ash, never yet duplicated in any asphalt. This inherent mineral filler definitely contributes to longer wear and protection against the weather.

With a thorough knowledge of roofing combined with a thorough knowledge of asphalts and *The Vital Element*, Barber has perfected Barber Genasco Bonded Built-up Roofings—bonded for 10, 15 or 20 years—as well as other types of built-up roofings, which you can specify with confidence. Barber will be glad to forward specifications and a free copy of the descriptive folder, "The Maximum Roof Protection." Specify Barber Genasco Roofings and remember—*The Vital Element* has no equal.

THE BARBER COMPANY, INC.
ASPHALT HEADQUARTERS SINCE 1883
PHILADELPHIA • PENNSYLVANIA

SHINGLES • SIDINGS • ROLL ROOFINGS • BUILT-UP ROOFINGS
ASPHALT WATERPROOFINGS OF EVERY DESCRIPTION



A perfect example of how Transite Walls, here shown with quilted-maple veneer, add to the attractiveness of an office. This modern material takes lacquer, paint, wood veneer, fabric or any other finish. Or it can be left in its natural, neutral color. (Installation for Schenley Distillers, New York. Designed by Hegeman Studios, Inc.)

REMARKABLE FLEXIBILITY ACHIEVED IN MODERN MOVABLE WALLS . . .

TODAY, any architect can plan office-partitioning needs with every assurance that future changes can be easily and economically accomplished.

This is made possible by Transite Walls—the most adaptable of all modern movable wall materials. Because Transite Walls have a unique construction method, they can be rearranged or completely relocated with no loss of material. And erection . . . in every instance . . . is a dry, almost noiseless process.

Here, too, is a partition that—though movable—provides the solidity and privacy of fixed walls. For Transite is asbestos-cement in composition, hence inherently durable, permanently

fire- and sound-resistant, immune to rot or decay. In addition, Transite Walls offer a flush, projection-free surface with unlimited decorative possibilities.

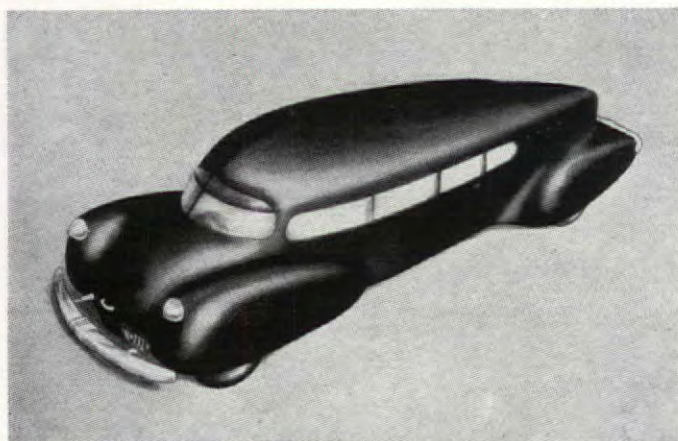
An illustrated Transite Walls brochure, containing complete details, is available on request. It can be secured by writing Johns-Manville, 22 E. 40th St., New York, N. Y.

The secret of Transite Walls' great flexibility is the special construction method used. Concealed steel studs and holding devices permit fast, easy relocation of Transite Walls with 100% salvage. And yet, they provide the solidity and privacy of fixed walls.

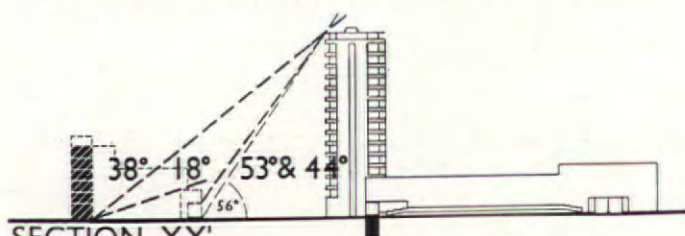


BOOKS

Books of the year . . . Design and construction of chairs . . . Technological trends and national policy . . . A German dictionary of architecture.



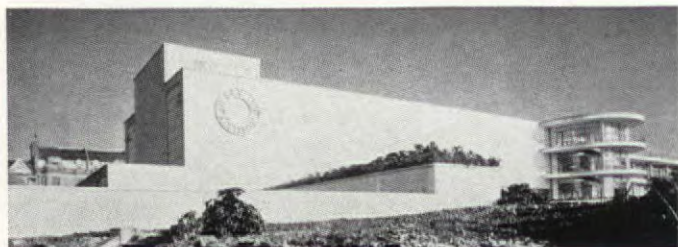
REAR-ENGINE CAR, from **ART AND THE MACHINE**



INSULATION STUDY, from **HOUSING, VOL. I**



LOG HOUSE, from **EARLY ARCHITECTURE OF WESTERN PENNSYLVANIA**



SEASIDE PAVILION, from **MODERN BUILDING**

A survey of the titles published during any given period will reveal a number of outstanding books; more illuminating, however, is its use as an indicator of trends. For 1937, books reflected the following trends: the steadily growing acceptance of modern architecture; the widening scope of industrial design; the establishment of large-scale housing as a small, but finally recognized part of the U.S. building picture. Following is a selected list; for more complete reviews, see the issue indicated.

HOUSING, Vol. I, by the Building Centre Committee. The Rolls House Publishing Co., Ltd., London. 30 shillings.

Survey of Housing in Denmark, England, France, Holland, Spain, and Sweden. Well organized for reference (July, p. 28).

URBAN HOUSING, by the Federal Emergency Administration of Public Works. U.S. Government Printing Office, 20 cents.

PWA's first three years of housing activity, briefly summed up in text and pictures (Jan., p. 22).

CATCHING UP WITH HOUSING, by Carol Aronovici and Elizabeth McCalmont. Beneficial Management Corp., Washington, D. C. \$2.00.

Statistics on incomes, housing conditions, employment, government activities, and their relation to housing problems (Feb., p. 78).

ZONING, by Edward M. Bassett, Russell Sage Foundation. \$3.00.

Comprehensive history of zoning in practice, by an authority (Jan., p. 60).

MOSCOW IN THE MAKING, by Sir E. D. Simon, Lady Simon, W. A. Robson, and J. Jewkes. Longmans, Green and Co. \$2.50.

Unevenly written book, of interest for its description of the largest city planning project of modern times (Aug., p. 28).

MODERN BUILDING, by Walter Curt Behrendt. Harcourt, Brace, and Company. \$3.00.

A mature study of the development of modern architecture in relation to social backgrounds. Probably the best work on the subject in English (June, p. 34).

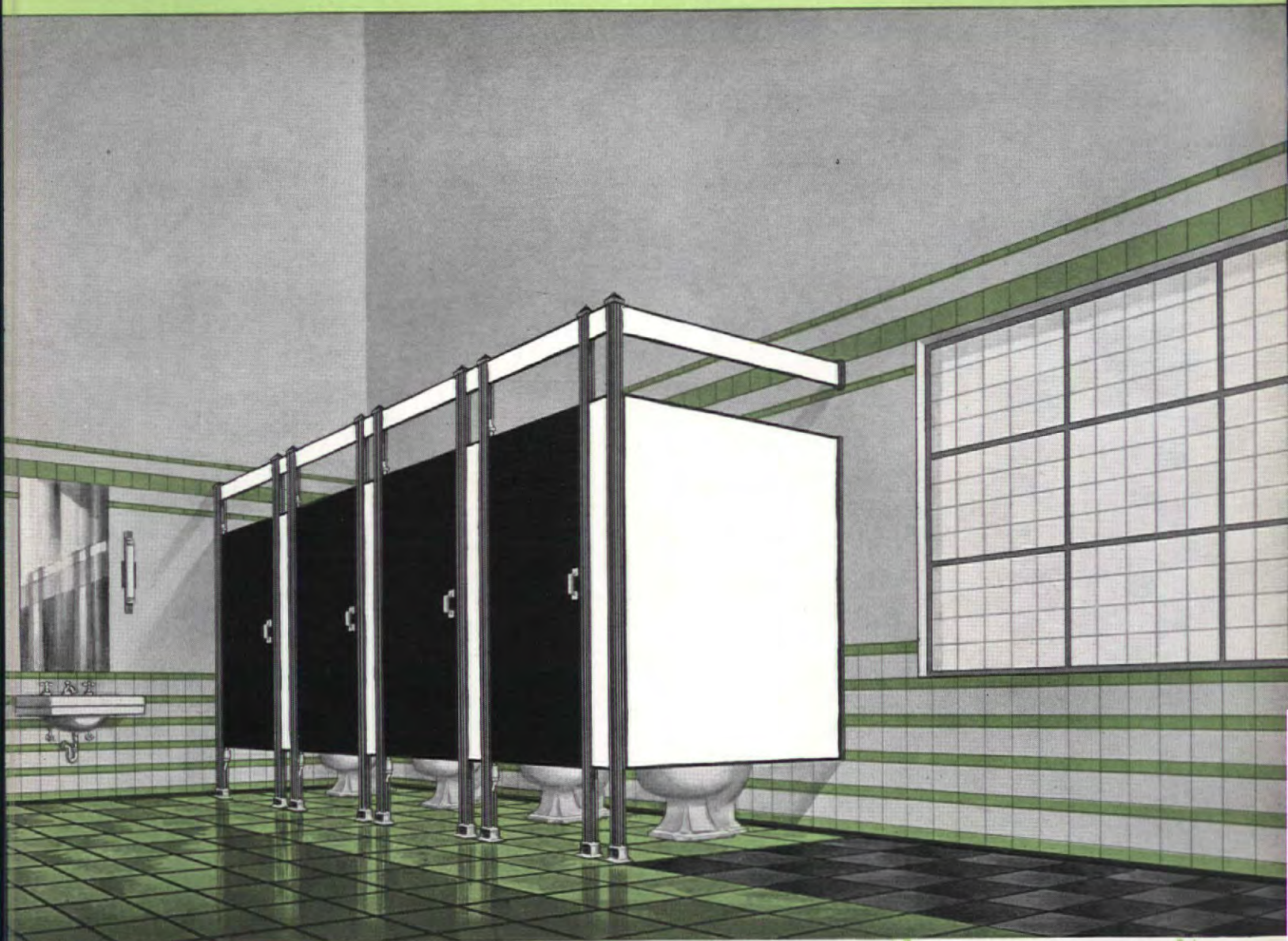
THE NEW ARCHITECTURE IN MEXICO, by Esther Born. William Morrow and Co. \$3.50.

Mexico's modern architecture, superlatively well photographed, organized, and presented. Contains a section on painting (Sept., p. 42).

FERIENHAUSER, by Herbert Hoffmann. Julius Hoffmann, Stuttgart. RM 6.50.

Week-end and vacation houses, chiefly German. Includes some excellent modern work (Oct., p. 44).

(Continued on page 92)



A TOILET ROOM ENVIRONMENT THAT WINS AND RETAINS RESPECT *yields rich returns in good will*

● Toilet room environment is no less a factor in the development of good will than the environments of other rooms. Sanymetal's development of Porcena Toilet Partitions unfolds a new era in treatment of toilet room environments.

An installation of Porcena Toilet Partitions creates a cheerful environment, one that is light, airy, clean and healthy. Furthermore, it is natural for people to refrain from abusing such fine equipment and to do their share towards maintaining orderliness and cleanliness. The flint-hard, glass-smooth surface of Porcena Toilet Partitions absorbs no odors, is rust and moisture proof, non-porous and impervious to ordinary acids. This lustrous finish can be wiped clean as easily as the surface of a kitchen range. Colors are permanently fast—will not fade.

The suitability of Porcena Toilet Partitions for toilet rooms in every type of building has been amply demonstrated by installations in every section of the country. Simplicity in design makes them especially adaptable for modernization of present toilet rooms. The sturdy strength and sound mechanical construction of Porcena Toilet Partitions fortifies them to give years of sanitary service—to survive obsolescence years longer than conventional type installations.

The Sanymetal representative in your locality is experienced and competent to discuss toilet room environments and will gladly assist you with constructive suggestions . . . Write for colorful brochure of modern toilet room environments.

The first to originate and offer a definite style of toilet partition and wainscot panel utilizing porcelain enamelled panels, Sanymetal presents a wider scope for the creative talents of a patient profession and protects the building industry in the use of such materials by years of accumulated engineering and craftsmanship experience in the manufacture of certain exterior parts of porcelain enamelled metal.



Sanymetal's Catalog is contained in Sweets' for 1937 identified as catalog 20/18.

Sanymetal

THE SANYMETAL PRODUCTS CO., INC.
1687 Urbana Road, Cleveland, O.

TOILET AND OFFICE PARTITIONS

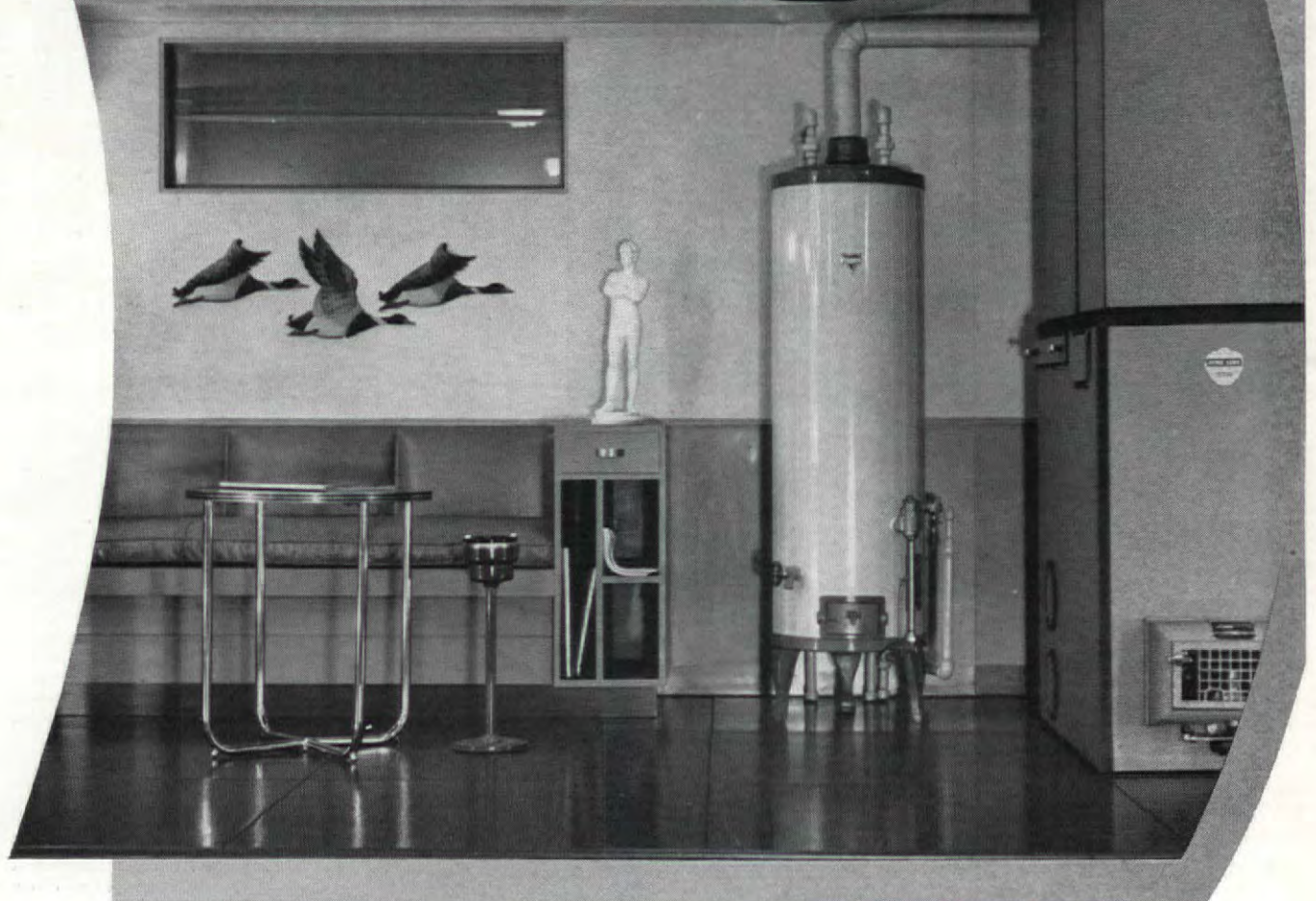
Porcena

PORCELAIN ENAMEL TOILET PARTITIONS

Porcena Panels possess the natural structural strength of steel (not one sheet but two 16 gauge sheets securely bonded on opposite sides of dense insulating core) strengthened by porcelain enameling (four layers) which provides a non-porous, flint-hard glass-smooth surface that is positively impervious to odors, acids and moisture.

WIDER SCOPE IN HOME-PLANNING

When you specify Gas
for the 4 Big Jobs!



A delightful playroom—no dust or grease from the heating plant—no space required for fuel storage!

The unique advantages of Gas make it the perfect fuel for modern, salable homes.

In the first place, it's dependable . . . In the second place it's clean . . . Third, it's economical.

Up-to-date appliances have been designed to use this perfect fuel efficiently. They're modern, but not "new-fangled." They are designed for performance and convenience as well as

good appearance. Sturdily constructed, so you may be sure they will give your clients long, reliable service.

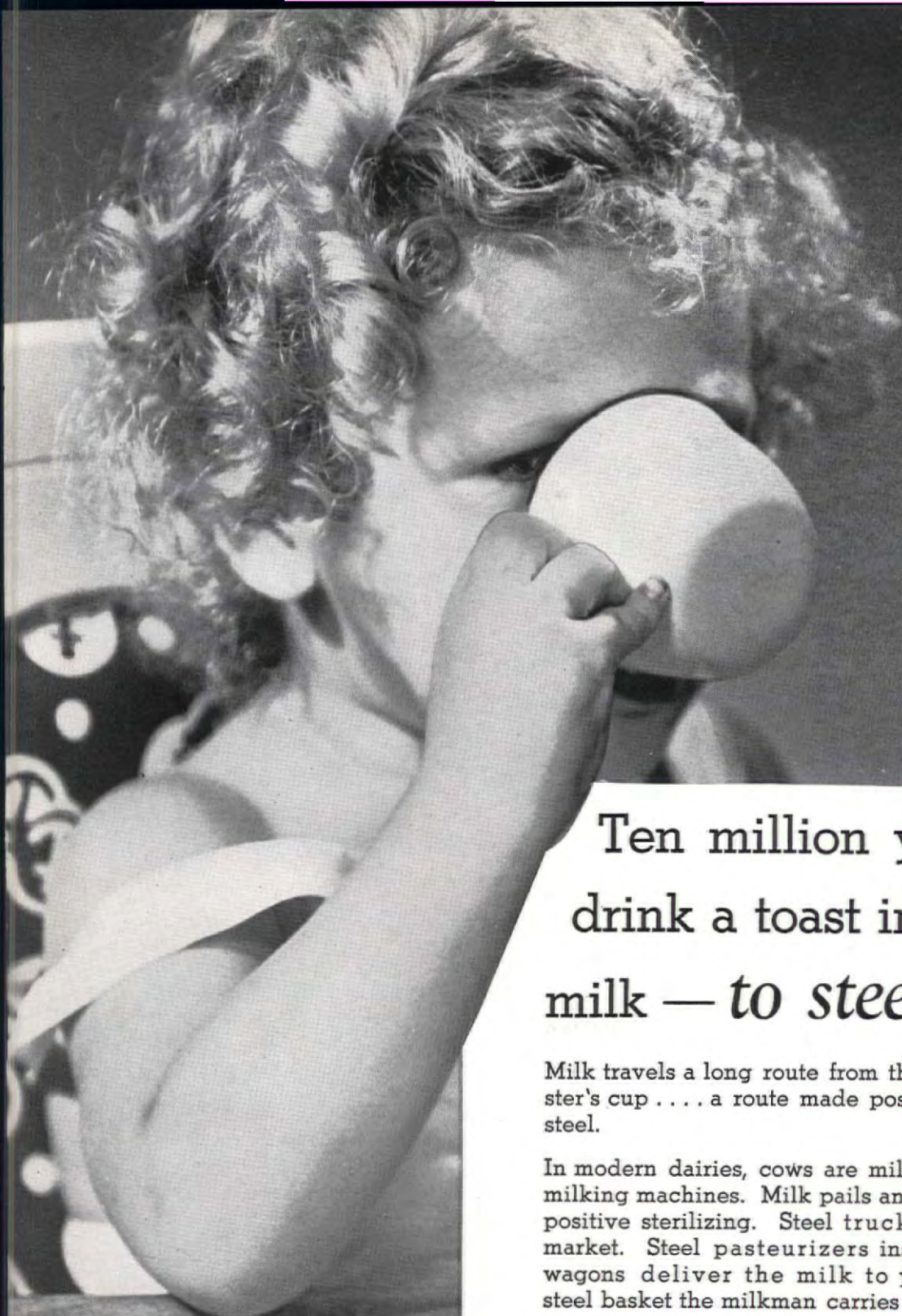
"GAS FOR THE 4 BIG JOBS" will fit like a glove into your home-planning.

Get the facts about the appearance, performance and economy of modern gas appliances. Go to your local gas company for full information.

American Gas Association

Be sure the Gas Appliances you specify carry the Approval Seal of the American Gas Association Testing Laboratories.





Ten million youngsters drink a toast in healthful milk — *to steel*

Milk travels a long route from the cow to your youngster's cup . . . a route made possible -- *made safe* -- by steel.

In modern dairies, cows are milked by sanitary steel milking machines. Milk pails and cans are of steel for positive sterilizing. Steel trucks bring the milk to market. Steel pasteurizers insure its safety. Steel wagons deliver the milk to your street, and in a steel basket the milkman carries it to your door.

So begins your day, in which steel plays an all-important part. You shave with a steel razor. Your coffee "perks" in steel. You ride in a steel car, to work in a steel-framed building, at steel machines, typewriter or desk. Your dinner is cooked on a steel range, you read at a lamp wired through steel conduit, you go to sleep on steel springs. Youngstown makes these steels--each steel developed by research to best serve its purpose.



THE YOUNGSTOWN SHEET AND TUBE COMPANY

Manufacturers of Carbon and Alloy Steels
General Offices - - - YOUNGSTOWN, OHIO

Sheets - Plates - Pipe and Tubular Products - Conduit - Tin Plate - Bars - Rods - Wire - Nails - Unions - Tie Plates and Spikes

25-2A

YOUNGSTOWN

Give buildings the 4-Way Economy of Robertson Steel Floors



WHATEVER type of building you are designing, you owe it to yourself and your clients to investigate the Robertson Steel Floor. Our brochure, "New Life For Buildings," will explain its many structural and electrical advantages in detail. It's free. Address H. H. Robertson Co., 2004 Grant Bldg., Pittsburgh, Pennsylvania.



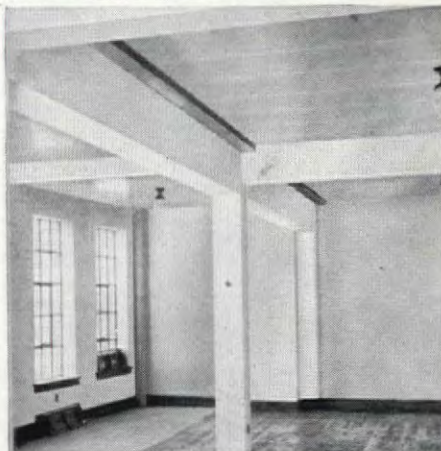
Lifts Dead Weight From Floor Areas

Light in weight, and yet with exceptional live load capacity, this floor frequently makes possible the reduction in dead weight load of supporting structural steel from foundation to roof.



Cuts Down Installation Costs

Robertson Steel Floor can be quickly and easily installed. Once laid, it immediately forms a safe, solid platform upon which to work. Speeds erection 20% to 30%. Eliminates fire-hazardous wood forms.



Flat Underside May Serve As Ceiling

The smooth, flat underside of the FKX type Robertson Floor, when painted, forms an attractive ceiling. Or acoustical board may be applied directly to the ceiling if desired.



Longer Useful Electrical Life

The cellular construction provides a new electrical availability—equips buildings to economically meet any present or future need. Every cell may be used as a wireway for wiring distribution. Outlets may be cut in anywhere over the entire floor area.

ROBERTSON STEEL FLOOR SYSTEM

THE FINEST BALANCE

REQUIRES THE FINEST

ENGINEERING

Allis-Chalmers engineers now set a new high standard in DYNAMICALLY BALANCING Sheaves for TEXROPE V-BELT DRIVES. Over their entire range of speed, up to 6,000 rpm. these sheaves have no vibration period . . . they run like a watch movement from 1 rpm. right up to 6,000 rpm.

Allis-Chalmers has made the DYNAMICALLY BALANCED SHEAVE commercially available for applications that require the most extreme accuracy and precision, and can therefore tolerate no vibration at any time or at any speed.

Your V-BELT drive applications may not require

such fine balance, but whatever TEXROPE V-BELT DRIVE equipment you buy will have the same caliber of engineering ability and experience built into it, that produced the ALLIS-CHALMERS DYNAMICALLY BALANCED TEXROPE SHEAVE.

Write for Vari-Pitch Bulletin No. 1261-A

Belts by Goodrich

743

TEXROPE DIVISION
ALLIS-CHALMERS



M I L W A U K E E W I S C O N S I N

LETTERS

Why Jitter?

Forum:

It is difficult either to account for or justify the jitteriness which has lately gripped the businessmen of this country. We have always been of the opinion that the volume of industrial building construction was a good barometer of the immediate future, because manufacturers expand their plants only as they see the need for it. Judging from the volume of factory building during the first six months of this year, one can believe that the recent pause in business is but a lull before a more substantial prosperity than has been recorded thus far in the current recovery.

It cannot be claimed that there has been overexpansion of production capacity. A survey made toward the end of 1934, to determine the need for new factories, disclosed that at that time the country was behind in industrial construction to an extent conservatively estimated at \$970,000,000. Less than half of this has been built, notwithstanding the fact that we have had a further three years of industrial development since then. Thus it can be seen that we have far to go before we catch up with our requirements; and so long as we are in urgent need of production capacity, it is still a far cry from the end of the current recovery period.

We do not wish to appear overly bold in our prognostication; but we feel that we can fairly well follow that which transpires in industrial construction inasmuch as our office has been responsible for the design of 19 per cent of the total built in this country during this period, based on figures of the Brookmire Economic Service. Our observations cover a fair cross-section of the country as our buildings were erected in ten out of the fourteen States wherein manufacturing is a principal industry. Nor was the work in question restricted to any particular field. The plants were designed for the motor, steel, rubber, and aviation industries; factories for the manufacture of air conditioning equipment, Diesel engines, machine tools, office equipment, household appliances, drugs and chemicals, food products, cosmetics, and the like.

And the following figures seem to us most significant: 19 per cent of the work was due to obsolescence; 56 per cent was due to business expansion; 25 per cent was due to development of new products.

These figures disclose no cause for any attack of jitteriness.

MORITZ KAHN

Detroit, Mich.

Swan Acres

Forum:

I have read with interest the article concerning Swan Acres, near Pittsburgh, which appears in your November issue. You may be sure that I and my associates value the compliments that you have paid to the somewhat unique character of our development, and appreciate the effect of your article in directing attention to the progress of Modern or New American Housing. Do not, therefore, think me ungrateful, please, if I mention two or three points in which I think the impressions given are unfortunate.

In both the Swan Realty and Development Co., who are the owners of Swan Acres, and the B. P. B. Co., who are the architectural planners, I have valued associates and modesty obliges me therefore to correct the statement of your article that I am the development company and that I am the architectural planning company. It seems particularly incumbent on me to correct the latter statement in view of the fact that I am not an architect.

Reference to my former connection with one of the leading insurance companies of the United States is entirely agreeable to me; but my former employers or colleagues might think it in bad taste if I authorized any statement that while with them I commanded free choice of all territories in which their mortgage loan department was operative. All that I can have said at any time in any way resembling such a statement is that I came to Pittsburgh of my own volition when other alternatives were open to me, that I thought well of Pittsburgh then for the mortgage purposes of the insurance company, and that I think well of it now as a place in which to set up an undertaking like Swan Acres.

Now I come to an inaccuracy the implication of which is more in need of correction than either of these others. It is not true that, when financing for the development of Swan Acres was required, the Provident Trust Co. made the necessary loan. The loan was one that the bank could not legally have made and to say that they made it would be to suggest an irregularity which in fact never occurred. The actual case was that the property now known as Swan Acres had been signed over to the Provident Trust Co. as additional security for a commercial loan, the original collateral for which had shrunk in value during the depression. Private financing was provided for our company, which then

proceeded to acquire the title to Swan Acres from the former owners, subject, of course, to the mortgage already held by the bank. The only effect upon the bank was that full liquidation, problematic before, now became assured.

HARRY E. POPLÉ

Pittsburgh, Penna.

For his temperate comment, THE FORUM awards the 1937 plaque for self-control to Subscriber Poplé. For his atrocious reporting a first and last warning to THE FORUM's Pittsburgh correspondent—Ed.

Union Outraged

Forum:

Your horribly garbled article entitled "A.I.A. and the Closed Shop" in your September issue certainly calls for correction in relation to the American Federation of Labor and the Committee for Industrial Organization.

We wish to inform you that the Federation of Architects, Engineers, Chemists and Technicians was never at any time a member of the AFL, did not switch to the CIO as stated, and that the AFL Local of Seattle is an organization of draftsmen that is now about twenty years old and a member of an International Union which has been working for the draftsmen of America long before the F.A.E.C.T. was ever dreamed of. That Local No. 17, as you state, created the first newsworthy labor scare that has hit the architectural profession by announcing that it aimed at using their seal on all working drawings, might not be a scare to those architects who see great good in the unionization of the draftsman. This does not occur to Mr. William Stanley Parker and many another of the class of architects who are still thinking in the days of Calvin Coolidge. . . .

GEORGE H. HOLLAND, President

Architectural and Engineering Guild
New York, N. Y.

Not "horribly garbled" in its report but mistaken on one point, THE FORUM stands corrected. The I. F. T. E. A. & D. U. is of long standing in the AFL, should not be confused with the F. A. E. C. T., which applied for an AFL charter and joined the CIO when faced with a closed AFL door.—Ed.

Allen Era of Good Feeling

Forum:

I have felt impelled to set down a highball glass that I was holding for a friend and write you a letter concerning the benefits of the Depression in re Architects, with a few sidelights on Bankers and Contractors.

(Continued on page 100)



NEW Larger Size . . . 900 Square Feet Steam,
1440 Square Feet Water . . . in Rex Smartline
Jacket to enclose boiler and short burners.

Note the burner is right in front, easy to get
at, also the door giving convenient access to the
Two-Pass Tubes and Spinner Blades.

Also in Regal Jackets to completely
enclose boiler and all burners.

With these two new boilers,
Kewanee now provides 18 Sizes
for Residences . . . with capacities
from 320 up to 2924 square feet
of steam radiation.

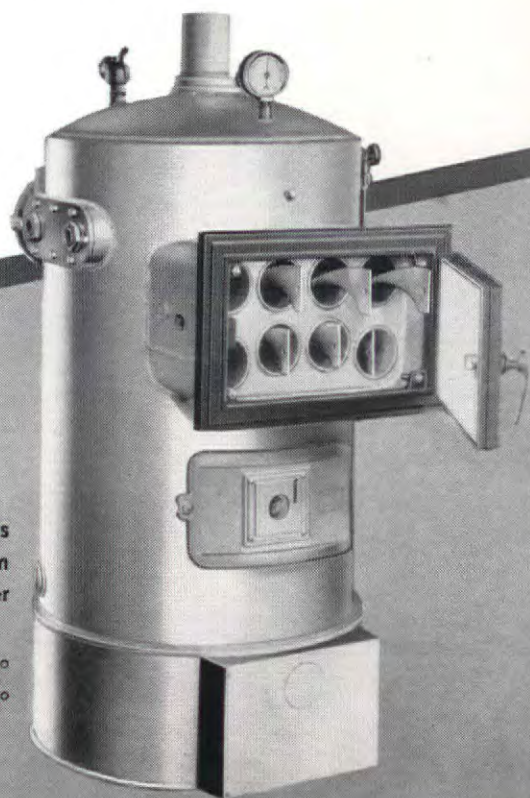
All are of steel . . . all have
Kewanee two-pass tubes for
greatest efficiency . . . and the
line offers an unusual choice of
jackets—from the very practical
"Tailor Fitted" Round and Square
Jackets to the Smartline Models
where complete enclosure of
boiler and burner with smartness
is featured.

Get the Facts about Round "R" Low Cost and Easy Financing Plan

KEWANEE BOILER CORPORATION
KEWANEE, ILLINOIS

Eastern District Office: 37 West 39th Street, New York City
BRANCHES IN 61 CITIES
division American Radiator & Standard Sanitary Corporation

A LARGER— as well as a SMALLER **KEWANEE** Type "R" ROUND STEEL BOILER for heating homes



NEW Small Size for Oil or Gas
400 sq. ft. Steam
640 sq. ft. Water

Domestic Hot Water
65 gals. at 212°
40 gals. at 180°

With Ordinary Windows - Anything Can Happen - BUT SILENTITE IS *Trouble Proof!*



Typical Silentite installation, showing pre-fit storm sash in place. Note the ventilating sash which provides draftless ventilation. This may be opened down to sill, if desired. Many architects specify Silentite pre-fit storm sash and screens with Silentite windows.



YES—there is a trouble-proof window. Hundreds of architects have cured "window pains" permanently with the Curtis Silentite Insulated Window.

Silentite is trouble proof, "painless," the first major window improvement in 300 years. Old-fashioned weights and cords that jammed and broke, and their rattling, sticking, jerking action, are replaced by a new principle in window design. Now sashes glide smoothly over metal-to-metal contacts. And Silentite is weather-stripped, is many times

more weather-tight than ordinary windows. That means fuel saving, as much as 25%, and a substantial aid to air conditioning.

Silentite fits every architectural style—frame, brick or stone exteriors. Its slim casing, trim and mullions allow great flexibility of design, assure distinctive beauty wherever it is used. And nothing is left to guesswork, for the fitting of frames, windows, trim, storm sash and

screens is controlled by the Curtis "pre-fit" idea which also lowers costs.

Mr. and Mrs. America don't want "window pains." That is why Silentite has been so popular. You will find Silentite easy to specify, easy to get, and permanently satisfactory.

Send the coupon for full information on Silentite, and the new Silentite Casement, introduced by Curtis last June, and on other Curtis products.

CURTIS COMPANIES SERVICE BUREAU, DEPT. AF-12, CLINTON, IOWA

AND OTHER CURTIS PRODUCTS—Exterior and Interior Doors • Frames • Trim • Entrances • Molding Panel Work • Kitchen Cabinets • Cabinet Work • Mantels • Stairways • Shutters • Screens • Storm Doors and Windows • Garage Doors • Mitertite Door and Window Trim.

Curtis Woodwork is Sold by Reliable Dealers Everywhere



THE "INSULATED" WINDOW

CURTIS COMPANIES SERVICE BUREAU, Dept. AF-12, Clinton, Iowa

☐ Please send me information on the Silentite Insulated Window ☐ On the New Silentite Casement
☐ On other Curtis Products

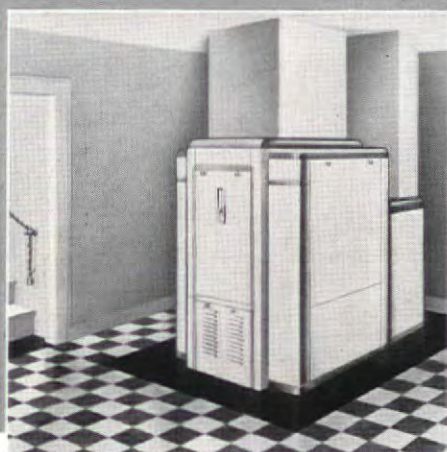
Name _____ Address _____
City _____ State _____

SUNBEAM CHOSEN TO OFFSET ST. LOUIS WEATHER



Two SUNBEAM-protected St. Louis homes
Top: Bernard McMahon, architect
Bottom: F. G. Avis, architect.

88 days under 32°
72 days over 90°



There are SUNBEAM models for coal, oil and gas . . . for any size of home . . . in any price class.

St. Louis architects are always facing a handicap in local weather conditions. 1936 had 88 days below freezing, 15 days below zero and 72 days above 90° . . . with a daily average humidity of 71% at 7 A. M. Such extremes are real problems for architects planning indoor protection against summer and winter. The toughest assignment falls on the heating and air conditioning equipment. It must be *dependable, efficient, economical* . . . 3 reasons why St. Louis architects are choosing SUNBEAM Air Conditioning.

There's no question about their clients enjoying healthful, year 'round air conditioning with SUN-

BEAM equipment. SUNBEAM Air is uniformly heated, properly humidified, gently circulated through the house, under automatic control. Filters keep the air free of dust and germs. Summers are pleasanter because cool night air can be drawn into the house by the blower. Mechanical cooling can be added at any time that the owner desires.

SUNBEAM Engineers offer architects the benefits of their fifty years' experience in air treatment. Mail the coupon below for details of their free planning service.

THE FOX FURNACE COMPANY, ELYRIA, OHIO

Division of American Radiator and Standard Sanitary Corporation

SUNBEAM AIR CONDITIONING

DELIVERS CLEAN FILTERED AIR... HUMIDIFIED AIR... CIRCULATING AIR
HEALTHFUL VENTILATION

HEATS IN WINTER... COOLS IN SUMMER

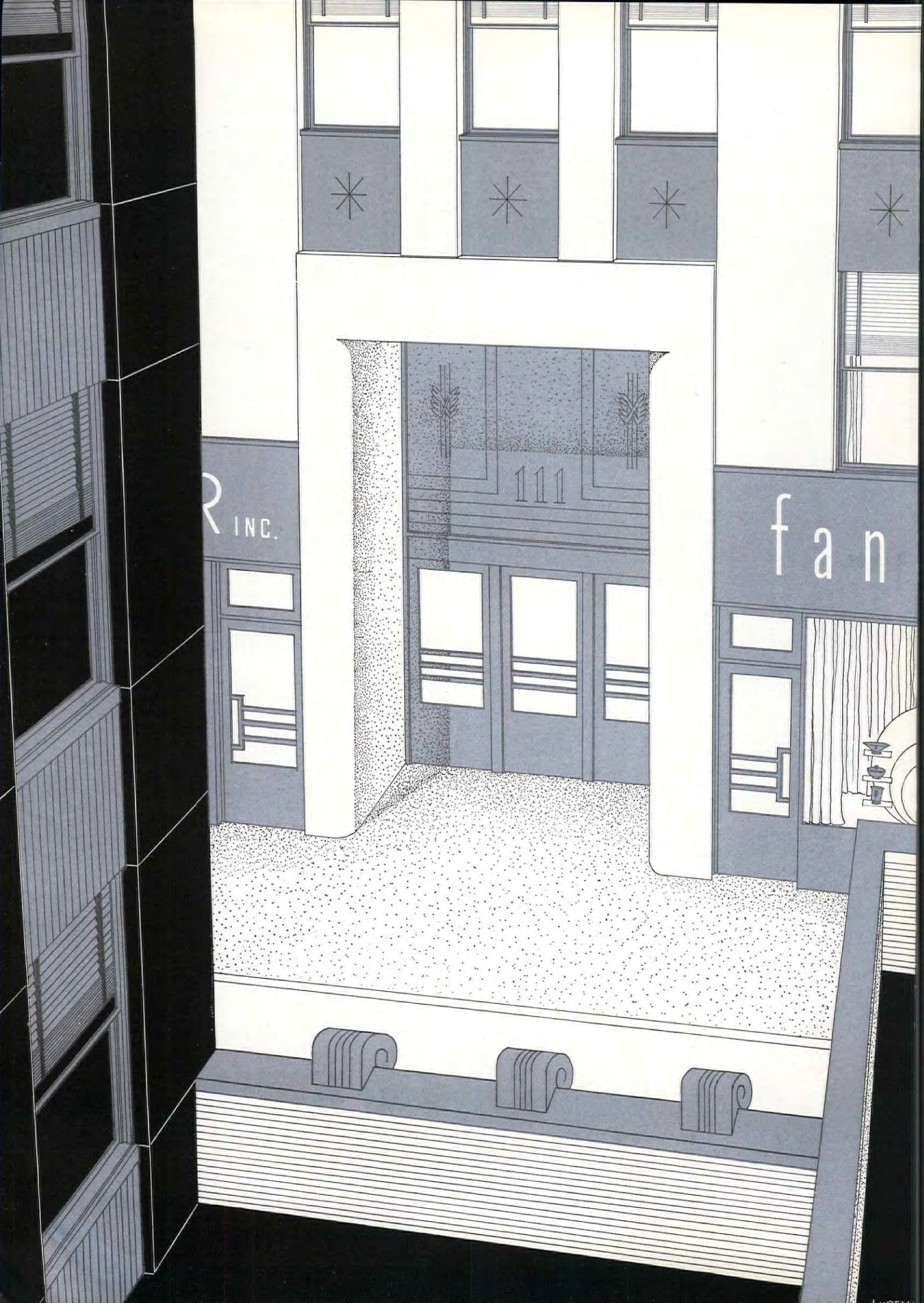
THE FOX FURNACE COMPANY,
ELYRIA, OHIO
Send me literature and data on SUN-
BEAM Air Conditioning . . . and details
on your free Air Conditioning layout
service.

Name

Firm Name

Address City

AF-12-37



R INC.

111

fan

★ ★ ★ ★ ★ ★ ★

IMPRESSION

A building must impart an impression favorable to its occupants; a sense of elegance for the modiste's shoppe, simplicity for an apothecary shop, refinement and permanence for the bank or office building, a more bizarre exterior for the variety store. In creating that impression, Aluminum lends itself readily to the will of the artist.

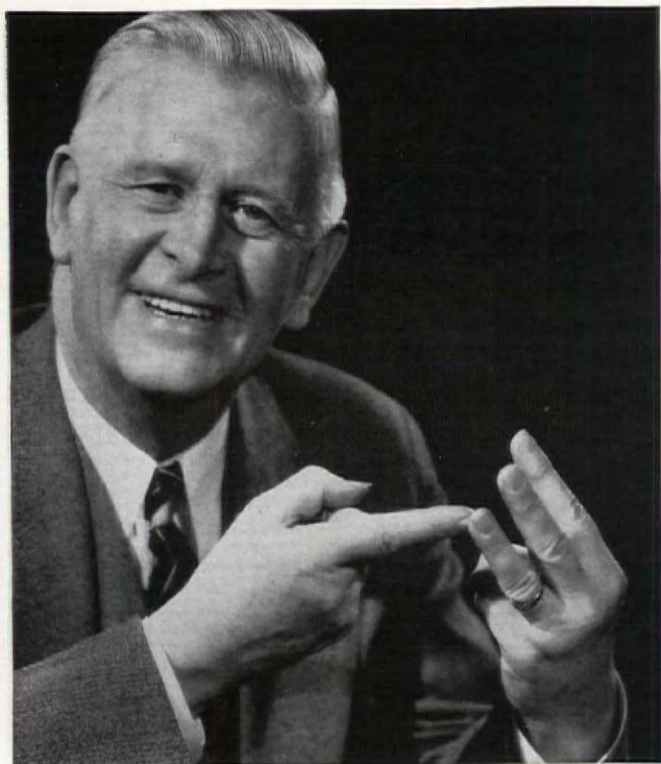
With Aluminum, an impression is lasting. Striking effects are accomplished with its varied finishes. The natural ability of Aluminum to resist corrosion preserves its attractive appearance without the added protection of paint, and with a minimum of maintenance. Fortunate is the building owner whose architect specifies Aluminum liberally.

Spandrels of cast Aluminum add beauty and simplify construction; light in weight, they are easy to handle, lessen building costs. Windows, sills and doors are available ready-made, in styles suited to every type of architecture. For complete building fronts and other construction, Aluminum sheet and a wide variety of standard rolled and extruded shapes permit the designer much latitude; special shapes can be developed for the individualist.

Alcoa Aluminum extruded shapes provide strength without the use of excess metal. This, coupled with the natural lightness of Aluminum, accounts for Aluminum construction costing less than other nonrusting materials. Aluminum Company of America, 2166 Gulf Building, Pittsburgh, Pennsylvania.



ALCOA • ALUMINUM



These 3 things

are mighty important to me

1. WHERE IS MY SOURCE OF SUPPLY? 1400 jobbers with Sloan stocks and 50 factory-trained Sloan representatives blanket the country from coast to coast. No matter where you are, Sloan service and Sloan supplies are close at hand. In emergencies you are not left with orphan valves. This is true *only* of SLOAN Flush Valves. Consider this when you buy or specify.

2. WHAT IS THE EXPERIENCE OF OTHERS? In schools, hospitals, hotels and commercial and industrial buildings of every type the vast majority of installations are SLOAN. Nearly four million SLOAN Valves are continuing to give, day after day, their incomparable service. Check any of the installations near you, or ask us for a list of jobs in your locality.

3. HOW MUCH WILL IT COST? Sloan prices are no higher than others but the total cost is much lower. Certified records, sent on request, show costs of $\frac{1}{4}c$ to $1\frac{1}{2}c$ per valve per year for maintenance, with water savings as high as 50% after the installation of Sloan Valves. Dozens of makes of flush valves have come and gone in the 31 years that Sloan has been on the market. Their replacement cost would have been saved had the owners originally used SLOAN. Buy now with an eye to the future.

SLOAN VALVE CO., CHICAGO, ILLINOIS



SLOAN FLUSH VALVES

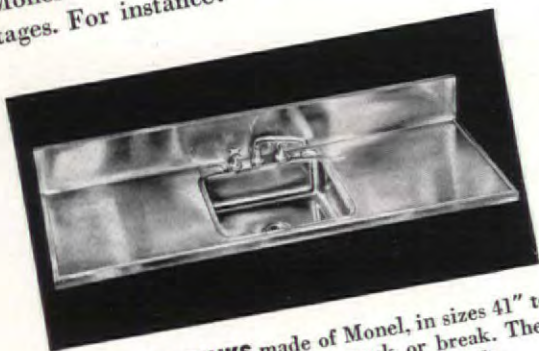
ACCENT ON

Monel

...Whitehead products put the accent where it belongs... on architectural finesse and sound construction, too

THE modern smartness of silvery work surfaces — every housewife admires them, wants them in her kitchen. Why not satisfy her natural desire? At the same time add to smart appearance quality, corrosion resistance, strength and long life! For that's what you get when you specify Whitehead Monel Household Products.

All Whitehead household products offer Monel's exclusive combination of advantages. For instance:



WHITEHEAD SINKS made of Monel, in sizes 41" to 168", never rust, peel, chip, crack or break. They keep their clean, silvery surface indefinitely.



***WHITEHEAD HOT WATER STORAGE TANKS** are made of Monel, and whether separate units or incorporated in automatic hot water storage heaters, are guaranteed to give at least 20 years of dependable, trouble-free service.


WHITEHEAD KITCHEN CABINETS are made of steel in a wide variety of standard widths and sizes for any kitchen. Base cabinets fit under all models of Whitehead Monel sinks. Monel cabinet tops are also furnished in all standard sizes.




In planning kitchens, why not make them attractive and workmanlike — both assured when you specify *durable, long-life* Whitehead Monel Household Products. Not far from you is a Whitehead branch with kitchen planning staff that will gladly help you develop harmonious kitchen layouts to please discriminating clients. Write for further information. Address:

*Reg. U.S. Pat. Off.

WHITEHEAD HOUSEHOLD DIVISION
METAL PRODUCTS CO.
OF NEW YORK, INC.
304 HUDSON STREET, NEW YORK, N. Y.




**PENBERTHY AUTOMATIC
ELECTRIC SUMP PUMP**
Made in 6 sizes



**PENBERTHY AUTOMATIC
CELLAR DRAINER**
(Water or Steam operated)
Made in 6 sizes

Copper and Bronze
Throughout



Thrifty


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

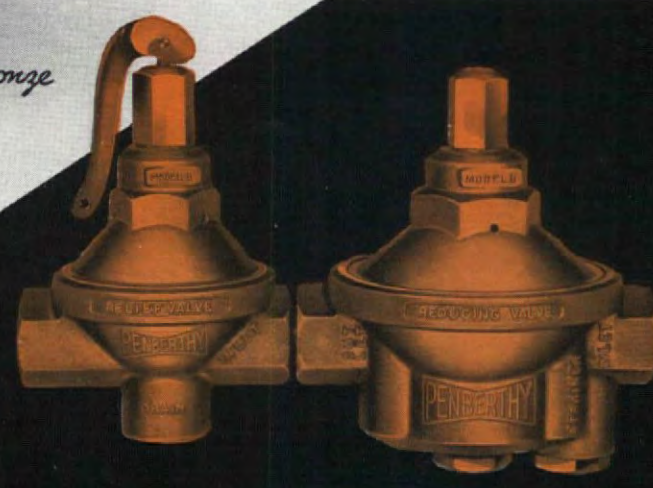
Penberthy Products are carried in stock by jobbers everywhere.

PENBERTHY HOT WATER HEATING SPECIALTIES


Constructed of
High Grade Steam Bronze

**PENBERTHY REDUCING
VALVE**
Made in 9 Models





**PENBERTHY PRESSURE AND
RELIEF CONTROL**
Made in 3 Models



**PENBERTHY
RELIEF VALVE**
Made in
14 Models
including Dead End Type

PENBERTHY INJECTOR COMPANY

Manufacturers of QUALITY PRODUCTS Since 1886
DETROIT, MICHIGAN • Canadian Plant, Windsor, Ont.



Homes without YEAR 'ROUND AIR CONDITIONING are going to be Back Numbers in just a few years!

People who are in the building market today want air conditioning that includes cooling and dehumidifying in summer. They have seen it demonstrated in Kelvin Homes across the country. They have learned of its practical economy. And thousands have decided that they will accept nothing less in the new homes they plan to build.

KELVINATOR MAKES IT EASY TO PROVIDE YEAR 'ROUND AIR CON- DITIONING IN ANY SIZE OR TYPE OF HOME YOU BUILD THIS YEAR

The homes you build this year can have this modern comfort feature. Kelvinator co-operation makes it easy, because Kelvinator pre-engineering covers every structural as well as equipment factor that affects air conditioning performance and economy. And remember, Kelvinator year 'round air conditioning has been proved practical, and extremely economical in hundreds of Kelvin Homes. Mail the coupon for full information.



Kelvinator

YEAR 'ROUND AIR CONDITIONING



GET THIS FREE BOOK

KELVINATOR DIVISION OF NASH-KELVINATOR CORPORATION, DETROIT, MICHIGAN

Without placing me under any obligation, please send me your complete reference book on year 'round air conditioning as introduced in Kelvin Homes.

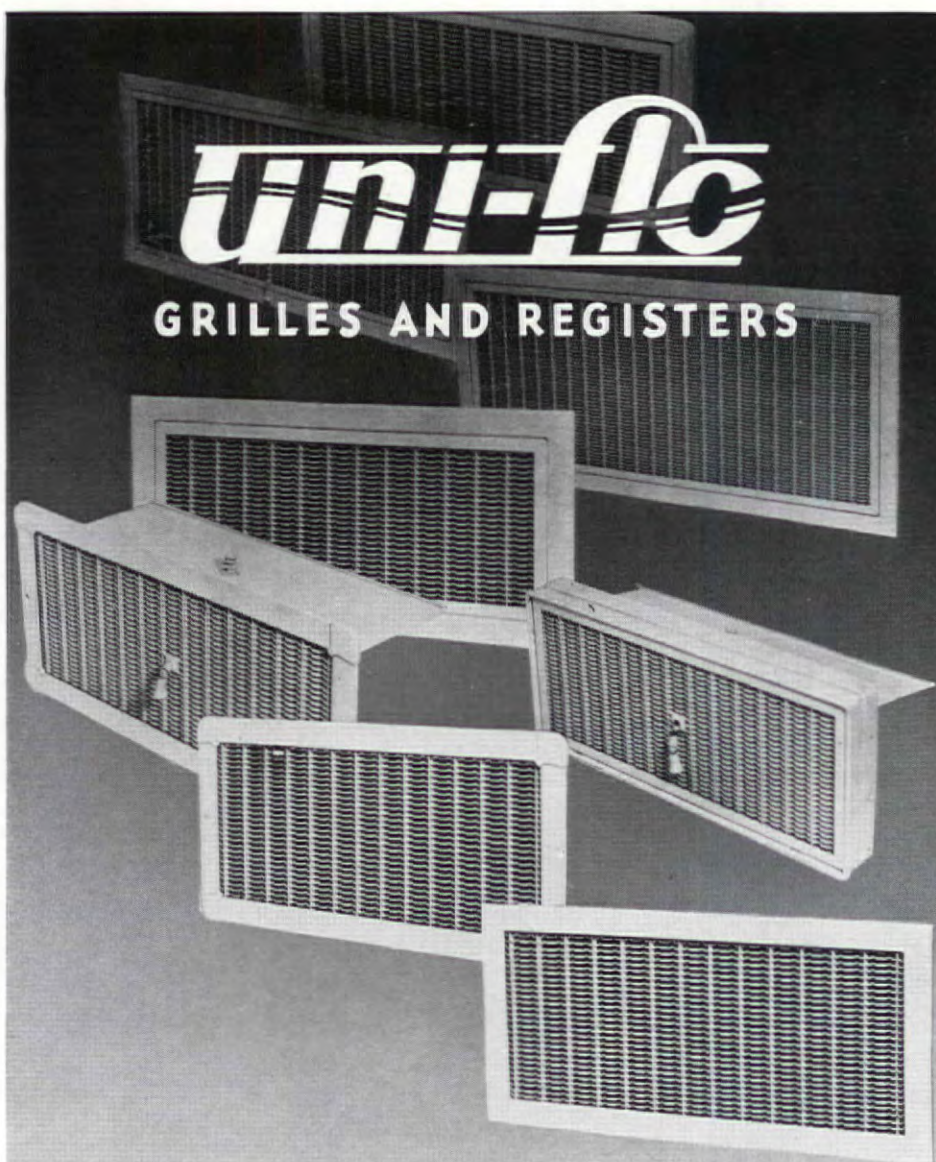
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AP-12



Engineered

AIR DISTRIBUTION

UNI-FLO Grilles and Registers permit the architect and heating engineer to plan accurately the proper distribution of heated, cooled, or conditioned air in any kind or size of enclosed space . . . from a large auditorium to an ordinary residence room . . . with assurance that undesirable drafts will be eliminated, noise level will be at a minimum, and temperatures throughout the entire space will be almost identical. A distinctive directional diffusing fin construction . . . exclusive with UNI-FLO . . . makes these outstanding advantages possible. Thousands of successful UNI-FLO installations will be found in every type of building all over the country.

*Do you have the UNI-FLO
Catalog in your file?*

BARBER-COLMAN COMPANY • ROCKFORD, ILL.

(Continued from page 532)

By 1937 it had risen to \$975, 14 per cent of the \$6,957 total. And the increase of labor costs was 55 per cent.

Pursuing his subject further, Realtor Russell derived some extremely provocative data on the average cost of houses in Seattle from 1909 to 1937.

<i>Year</i>	<i>Cost</i>
1909	\$1329.00
1910	1390.00
1911	1357.00
1912	1575.00
1913	1838.00
1914	1612.00
1915	1539.00
1916	1357.00
1917	1464.00
1918	1247.00
1919	1741.00
1920	2411.00
1921	2461.00
1922	2942.00
1923	3039.00
1924	3190.00
1925	3284.00
1926	3341.00
1927	3441.00
1928	3466.00
1929	3506.00
1930	3315.00
1931	3006.00
1932	1718.00
1933	2405.00
1934	1745.00
1935	3574.00
1936	4018.00

Newsworthy in this compilation is the fact that only in 1936 did the average cost top \$4,000. Even in light of the fact that these prices represent costs rather than sales prices, the fact that Seattle has been producing the under-\$5,000 house consistently for nearly 30 years merits some thought. So also is the fact that the average cost has more than doubled in the three years since 1934. Naturally, this is due to the increase in consumer income as well as to that in labor and material costs.

During the same period, there were 52,092 houses built in Seattle, or an average of 1,860 per annum. Again underlining the role the consumer plays in the determination of these average costs is the fact that when the average cost of the houses stood at their lowest in 1934, the number of houses built also hit a record low of 150 for the year. Last year's total was up to 531, as compared to the all-time Seattle high of 3,917 in 1918.

A further breakdown of costs in 41 Seattle houses costing an average of \$3,500 showed labor accounting for 14.2 per cent of the total; lumber and millwork together for 24.7 per cent; plumbing and septic tank or sewer for 10.1 per cent; heating and ventilating for 9.8 per cent; painting and decoration for 8.5 per cent; plastering for 7.4 per cent; chimney, fireplace, and brick work for 4.1 per cent.



Summer Wood Pleads GUILTY

*...give it a
Life Sentence
of White-Lead*

IN THE middle of the trial, the photomicrograph shown above was produced unexpectedly by the prosecution. Confronted with this damning evidence, summer wood broke down and confessed.

As you can see in the photo, the wood cells that grow in the summer months are considerably smaller than those in the spring wood layer. Furthermore their walls are thicker, harder and less porous than those of spring wood. Adhering to this dense surface is a difficult job for certain paints. After a short time, they "lose their grip" and start to scale off.

But not Dutch Boy White-Lead. This paint gets a good firm hold on



both spring and summer wood. It does not "let go" but continues to present an unbroken surface to the weather.

Still another point to be considered is wood's incurable habit of expanding and contracting. Some paints haven't enough elasticity. They crack under the strain. But not Dutch Boy White-Lead. This paint is highly elastic when first applied. And it stays that way through years of service.

Every application of Dutch Boy White-Lead is a tailor-made paint job — mixed to suit the special requirements of the surface to be painted —



• Look at the end grain of a board under a microscope. You will see something very much like this. Note the denser cell structure of the summer wood. Many paints have difficulty adhering to such a surface. Dutch Boy White-Lead gets a good anchorage on both spring and summer wood. That's one of the reasons why this paint does not scale off.

• • •

tinted to the exact shade you and your client desire. By specifying Dutch Boy White-Lead, you secure that combination of beauty and durability which is a fundamental objective of good architecture.

DUTCH BOY WHITE-LEAD

Good Paint's Other Name

NATIONAL LEAD COMPANY
111 Broadway, New York; 116 Oak St., Buffalo; 900 West 18th St., Chicago; 659 Freeman Ave., Cincinnati; 1213 West Third St., Cleveland; 722 Chestnut St., St. Louis; 2240 20th St., San Francisco; National-Boston Lead Co., 800 Albany St., Boston; National Lead & Oil Co. of Penna., 316 Fourth Ave., Pittsburgh; John T. Lewis & Bros. Co., Widener Bldg., Phila.



COMMENT ON THE MODEL HOUSE: AN APPENDIX

W. C. Miller, Washington, D. C.: . . . We seldom take an attendance record as numbers of visitors do not mean sales and if there are too many visitors the salesmen cannot properly contact the serious visitors.

Our model houses are always entirely furnished and covered constantly. Fresh cut flowers add to the attractiveness of the interior and our display period is usually four weeks. Up to the present time we have never had a display house that has not sold either before or during the exhibition . . . If the house is too blatantly advertised it attracts swarms of people from whom it is difficult to select those who are interested. The furnishing of the home gives the prospective purchaser a much better idea of what may be done with the property in case he should furnish it.

Robert Bartlett, Palos Heights, Chicago: The showing of model homes does not stimulate sales if a high priced model is shown, does stimulate sales if the model shown is within \$4,000 to \$6,000 price range. Model homes to be sold or duplicated at higher costs attract a smaller group of prospective buyers. Members of this group, probably because they have more money to spend, are chronic shoppers. Higher bracket

houses present great variety in design, construction, features, materials, and gadgets, which arouse conflicting desires and make the decision as to what to buy more difficult. Model homes to be sold or duplicated within a low price range attract a far larger group of prospective buyers. These are also shoppers but having less money to spend they will act and buy more quickly when they find desirable homes within their means. With rents rising by leaps and bounds these people realize that the sooner they acquire an economically priced house on easy terms, the sooner will they solve the high rent problem, which is becoming a greater burden year after year . . .

Low cost model homes unfurnished for display are less effective merchandising aids than are furnished homes of the same type. An unfurnished home appears smaller. The prospective buyer may fear that there is not enough room for his furniture. A model home, completely equipped and showing the disposition of all the furniture of the average American family dispels the illusion of smallness and demonstrates the actual roominess and comfort of the dwelling . . .

Model homes are good real estate merchandising aids if they are practical, eco-

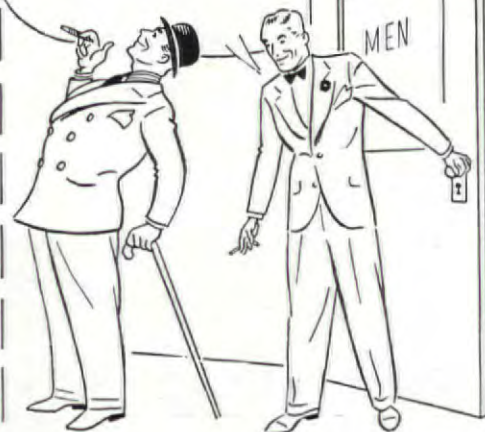
nomical examples of modern building and are located in a growing suburban community. Bizarre designs, experimental materials and elaborate construction may draw large crowds of curiosity seekers but are not [so] effective in arousing the desire to buy or build as are the substantial modern versions of conventional architectural design . . . Buildings and prices can then be compared with those of similar construction projects on a basis of known quantity and quality. The buyer feels himself on familiar ground and is ready to talk business . . .

H. B. Mott, Garden City, N. Y.: . . . We believe the model house has a very definite place in modern real estate merchandising, and we always have a number of them on display in different types of architecture, size, and price range.

After all, the purchase of a house, to the average family, represents a major undertaking. Most of our prospects know very little about the visualization of a completed dwelling from a set of blueprints, but they have real tangible evidence in a model, which can be inspected at their leisure, and about which they can ask all the pertinent questions they wish.

(Continued on page 54)

AND IT MIGHT
INTEREST YOU TO
KNOW THAT.....



YES, it *might* interest a prospective tenant to know that Ivory Soap Dispensers are installed in the washrooms of the "business home" you're showing him.

In fact, there's considerable evidence to support this belief. Evidence supplied by an increasing number of building owners and managers who report enthusiastic comments from their tenants on these exceptionally fine washroom appointments.

It might interest *you* to know how little it will cost to give *your* tenants Ivory Dispenser service. A line from you will bring you the facts and figures.

The gracefully designed Ivory Dispenser delivers pure, gentle Ivory Soap in fine, free-flowing flakes or granules. Each dispenser is a complete, self-contained soap dispensing unit. It has no parts to rust, tarnish or corrode; no complicated parts to clog, leak or get out of order. Tamper-proof. Low in first cost and in up-keep.

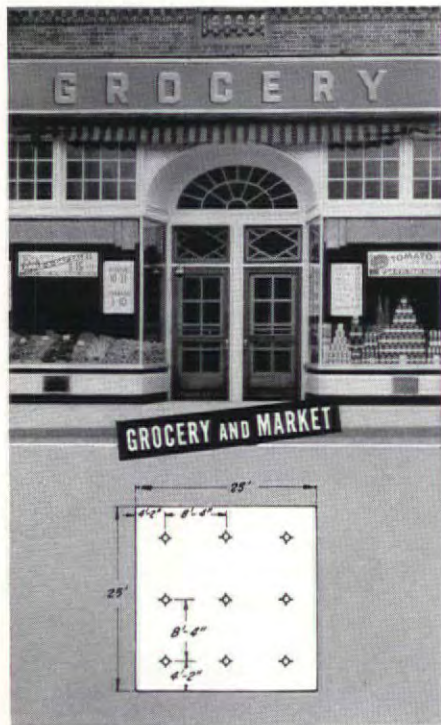


IVORY SOAP DISPENSERS

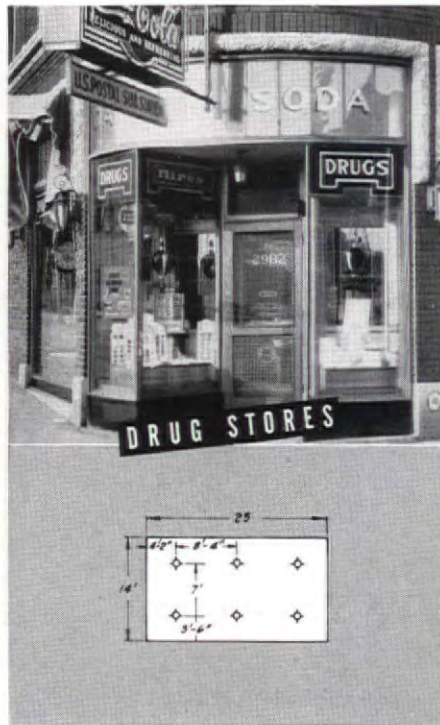
PROCTER & GAMBLE, Industrial Sales Department, Gwynne Building, Cincinnati, Ohio

Functional Lighting..

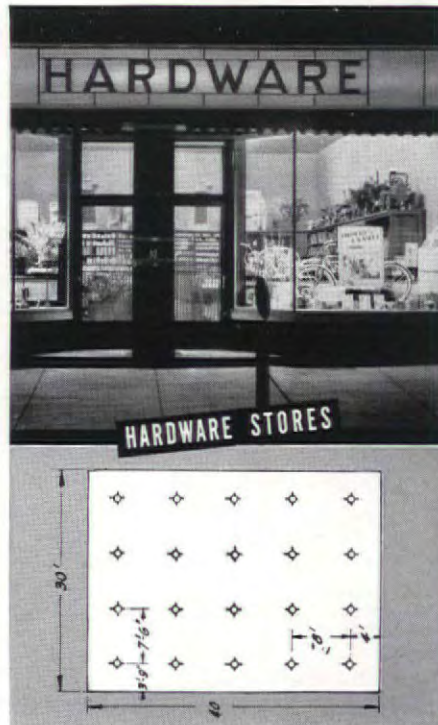
FOR STORES THAT FEATURE SHELF and COUNTER MERCHANDISE



GROCERY AND MARKET

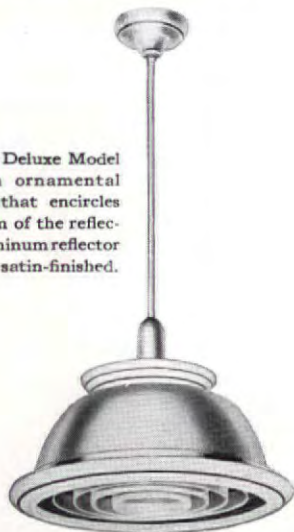


DRUG STORES



HARDWARE STORES

The Storlite Deluxe Model features an ornamental glass band that encircles the lower rim of the reflector. The aluminum reflector exterior is satin-finished.




Functional lighting for stores that feature shelf and counter merchandise means higher intensities of light at utilitarian levels. Such lighting is now a practical reality with the new Westinghouse Storlite. By playing up merchandise displays, the Storlite attracts more "lookers" and gives the buying urge a chance to manifest itself.

By pouring from 2 to 3 times more light on the merchandise than ordinary units of comparable wattage, this radically new and exclusive store-lighting fixture provides that much more Light for Selling! It provides also sufficient indirect light, reflected from the ceiling, for over-all store visibility. Thus it combines a proper balance both of direct and indirect illumination.

At normal angles of vision, the eyes of store patrons and employees are shielded from the light source by a translucent louver assembly. Outer and inner aluminum reflectors, finished by the famous Alzak process insure highest reflectivity, maintained intensity and utmost permanence. The Storlite is available in two models, which differ only in respect to the ornamental glass band which encircles the lower rim of the Deluxe Model reflector.

You are invited to call your local Westinghouse Distributor Lighting Specialist for further details; or write for complete descriptive folder to Westinghouse Electric & Manufacturing Company, Lighting Division, Edgewater Park, Cleveland, Ohio.

WHEN YOU THINK OF *Lighting* THINK OF
 **Westinghouse**

New
MESKER
Metal
WINDOWS
STOP
RUST
AT SILL
with
WROUGHT IRON
Sill Members

Makes the sill members (the most vulnerable spot on any window) totally impervious to progressive corrosion.

Send for the free fact revealing booklet "Only Concentrated Protection Reduces Window Maintenance Cost" based on an impartial window survey, then judge for yourself the extra value of solid rust protection as compared to all over surface coating.



Mesker
 SINCE 1879

MESKER BROTHERS Dept. A-1
 424 South 7th St. . . St. Louis, Missouri

(Continued from page 52)

A model house also gives the prospect an opportunity to exercise some of his own ideas regarding built-in features, orientation, etc., and a good builder will always cooperate to give the customers what they want, within their price limitations . . .

Janss Investment Corp., Westwood Hills, Cal. . . . The Janss Investment Corporation has very definite ideas about the model house and its worth in merchandising.

We have, with characteristic Hollywood showmanship, always had a "Housewarming Party" for the Press when Victor Hugo's or the Brown Derby or some catering service took full charge and skillfully managed dinner for fifty in the furnished house without using the kitchen or dining room, since of course these rooms were part of the show. Invitations, waiters, atmosphere and entertainment were synchronized with the architectural period and furnishings of the house. We find it gets a model house off to a good start to thus wish it well.

J. C. Taylor, Nichols Investment Company, Kansas City, Mo.: . . . There is, of course, a difference between a model house and an exhibition house. The model house is used sometimes by developers who are building a number of houses all practically alike and they will build one model house, furnish it, and take orders from this house for other houses that are to be built. We have not used the model house in this manner but have taken more or less typical houses, furnished them and invited the public to visit them as exhibition houses. We have used this plan in both large and small homes over a period of a number of years. Some of these properties run from \$8,000 or \$9,000 for the house and ground and go as high as \$60,000. To some homes, in which we have particularly stressed construction, the public has been invited to attend while the home was being built, particularly at certain stages of construction where we have called attention to construction features by hand lettered cards that were placed at various locations throughout the house. In this way, we would call attention to furring strips, insulation, packing around plumbing and dozens of construction items.

On houses that were furnished for exhibition purposes, we have frequently held a preview extending over a week or two before they were opened to the general public. To these homes, we have invited our prospects in order that they might view them without being a part of the crowds that usually attend these houses after they are open to the public generally. As a matter of fact, the crowds, rather than lack of them, are one of the problems of properly handling an exhibition house. It is frequently true that the very people

(Continued on page 56)

.....
MESKER
Wrought Iron
SILL
MEMBERS
REDUCE
WINDOW
MAINTENANCE
COST
over
90%

Wrought iron with its inherent resistance to rust makes window maintenance costs practically disappear when used for sill members, because actual tests show that over 90% of all window maintenance is concentrated at the sill.

Prove to yourself the value of concentrated sill protection. Send for the results of a fact finding survey incorporated in the free booklet "Only Concentrated Protection Reduces Window Maintenance Cost."



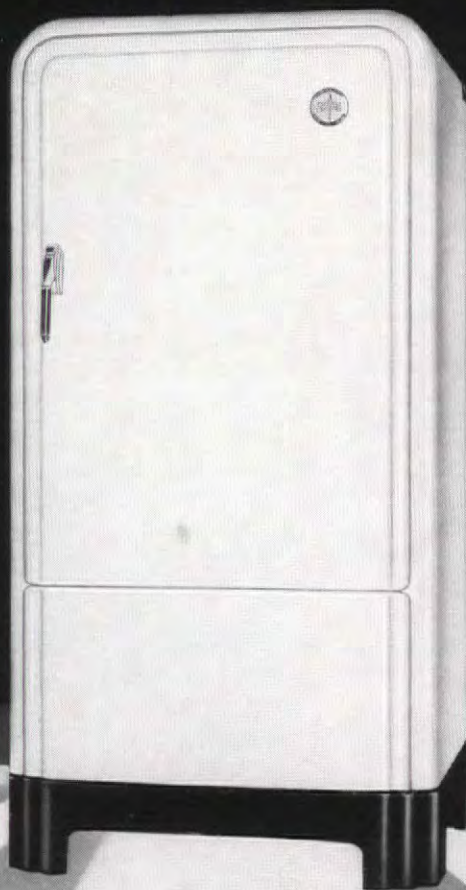
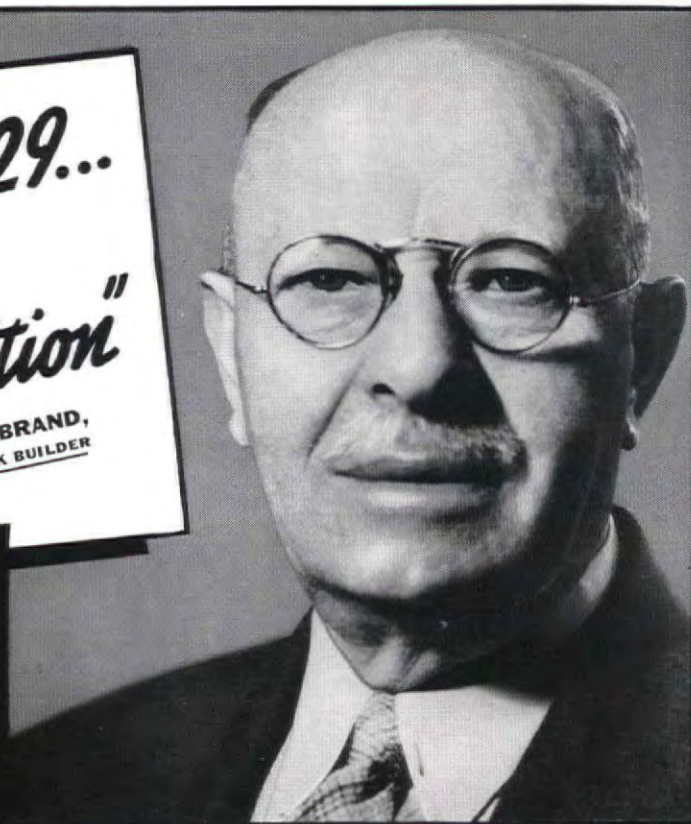
Mesker
 SINCE 1879

MESKER BROTHERS Dept. A-1
 424 South 7th St. . . St. Louis, Missouri

*"Installed in 1929...
still in
First-Rate Condition"*

SAYS MR. AARON BRAND,
PROMINENT NEW YORK BUILDER

SERVEL ELECTROLUX THE *Gas* REFRIGERATOR



DO YOU OWN any properties in which refrigerators were installed as long ago as 1929? Are those refrigerators still giving A-1 performance?

Read what Mr. Aaron Brand, of New York City, says:

"I suppose that builders have a better opportunity than most people to judge refrigerators. From the time I installed my first Servel Electrolux back in 1929, I have bought more than 500 of them. And even the oldest of these refrigerators are still in first-rate condition, and doing a good job silently."

NO MOVING PARTS

Servel Electrolux is today preferred by experienced builders and owners because it has established an amazing ten-year record of efficiency. The secret of this efficiency is the different freezing principle by which the gas refrigerator operates. It has no moving parts in its entire freezing system. Nothing to grow noisy, nothing to wear, nothing to cause costly upkeep.

To your tenant, this difference means permanent silence . . . continued low running cost . . . greater satisfaction in every way. To you, it means freedom from all the ordinary refrigeration troubles and substantial economies in maintenance. See the beautiful new models today at the showroom of your local gas company. Servel, Inc., Servel Electrolux Sales Division, Evansville, Indiana.

EXPERIENCED BUILDERS SPECIFY SERVEL ELECTROLUX
THE GAS REFRIGERATOR

MONCRIEF

winter
AIR CONDITIONING

*Adds much more to
value than to cost*



ASIDE from greatly increasing the comfort of the owner, Moncrief Winter Air Conditioning adds to the value of a house in many ways. The basement is made freely available for any use desired. Clean, properly humidified air preserves the house and its furnishings. And warm air conditioning requires no accessories to take up space in the various rooms or to interfere with the arrangement of furniture.

Whether the house be large or small, Moncrief can supply a unit of exactly the right size and type—for burning gas, coal or oil with highest efficiency and economy. Beautifully finished in the modern mode.

Moncrief Engineering Service is available without cost to architects and builders for estimating and laying out installations.

Write for
illustrated
literature and
data sheets

THE HENRY FURNACE & FOUNDRY CO.
3485 E. 49TH Street • Cleveland, Ohio

(Continued from page 54)

you want to get into a house will not stand in line and be herded through as is sometimes necessary when these crowds are large. This applies particularly to the better houses because any house in the \$10,000 bracket, or better, is sure to have a large number of people visit it who cannot possibly be in the market for homes in that particular price class.

As a rule, we keep these houses open in the afternoons and Sundays and if they are exhibited during the summer time, we keep them open during the evenings.

... We feel sometimes that the specialty man interested in the sale of refrigeration, stoves, heating equipment, kitchen equipment, special screens, floor covering and other featured articles gets much greater good in proportion to the effort put forth in these exhibition houses than does the realtor ...

Arthur R. Rule, Wychwood, N. J.: I think many developers have hesitated to express themselves about model houses or exhibit houses for fear they might offend the manufacturers or sponsors of such houses.

In our opinion, model houses have become generally commonplace, as built and exhibited by numerous builders and developers throughout America. We have been successful in our experiences and we believe we can trace this success to certain definite things.

1. Design of the house must be by an architect of unquestioned ability and if possible by an architect who is well known.

2. The design of the house must embody certain new features, or adaptations, which make it strictly up-to-date, not just another house.

3. The public is thoroughly conscious of the vast improvements in building materials and equipment. Air conditioning, insulation, mechanical conveniences, time and wear resisting decorations, economies of space, and other items are demanded.

4. In brief, a demonstration house must be NEWS.

In point of completeness and success as a demonstration, we believe that the Wychwood *Good Housekeeping* House attracted wider attention and the greatest "applause." Built originally as a construction demonstration, and erected under the supervision of its architect, Dwight James Baum, this house attracted between 15,000 and 20,000 people to view and inspect it under course of construction. It was then decided by *Good Housekeeping Magazine* to decorate and furnish the house as a complete demonstration. The records show that an additional 42,000 people visited the house, which opened June 30 and closed September 24. Visitors came from far and near, from towns all over New Jersey and suburban New York; also from distant States such as Texas and Missouri.

(Continued on page 58)

PROPER VENTILATION for Industrial Buildings

Here are three modern ventilators which meet every Industrial requirement

SWARTWOUT ROTARY



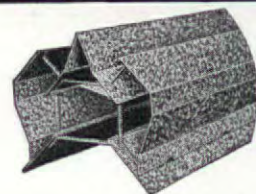
Built along ultra-modern lines, with efficiency and economy proven in over a quarter-century service.

SWARTWOUT AIRJECTOR



A fan ventilator with the basically correct principle—high capacity and low operating cost. Used wherever power ventilation is desired.

SWARTWOUT-DEXTER HEAT VALVE



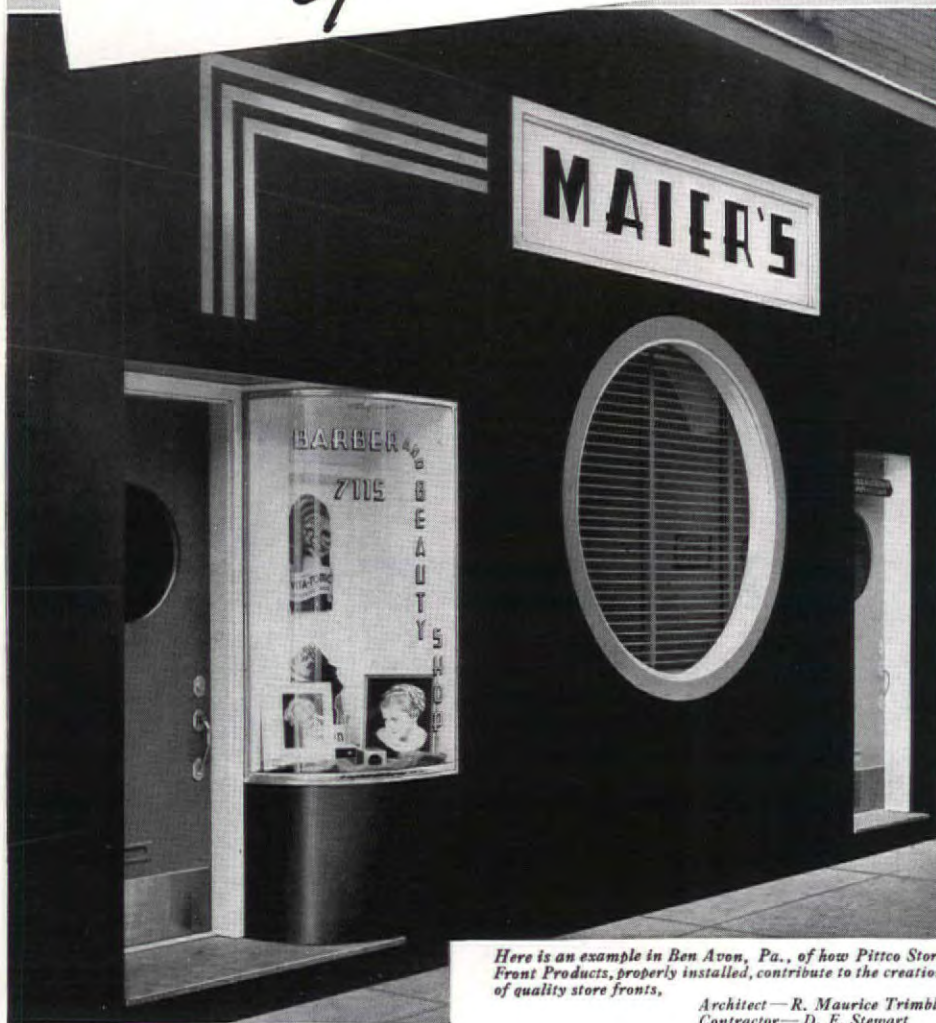
Continuous opening ventilator. Provides large opening at relatively small cost. Ideal for heat and smoke removal and general ventilation.

Swartwout Engineers are available for personal consultation without obligation.

Write for complete data.

THE SWARTWOUT COMPANY
18617 Euclid Ave. Cleveland, Ohio

PITTCO STORE FRONTS ARE MORE THAN "Good Enough"



Here is an example in Ben Avon, Pa., of how Pittco Store Front Products, properly installed, contribute to the creation of quality store fronts.

Architect—R. Maurice Trimble
Contractor—D. E. Stewart

Pittco Store Front Products—properly installed—can mean the difference between store front jobs that excite favorable comment and jobs that are merely "good enough."

PITTCO Store Front Products are products of tested quality. Meant to be used together, they create harmonious, unified fronts and are adaptable to original treatments that widen your scope of creative possibilities.

Insist on proper installation—and you can count on Pittco Products to carry out your design to its best advantage. The Pittsburgh Plate Glass Company maintains crews of skilled workmen throughout the

country specially trained to install Pittco Fronts properly. Find out what the complete line of Pittco Products has to offer you . . . and your clients. Send the coupon—now—for our free book. It contains facts, figures and photographs which you will find helpful in planning outstanding Pittco Fronts.

PITTCO
STORE FRONTS
glass...metal...paint

Paint * **PITTSBURGH** * *Glass*
PLATE GLASS COMPANY

IT has always been the policy of the Pittsburgh Plate Glass Company to develop and manufacture paint and glass products as exactly suited to the requirements of the architect as possible. For this reason, we welcome suggestions from architects as to how we may make our products and our service even more valuable to them. And conversely, we are always glad to do everything within our power to aid the architect in matters relating to the use of glass and paint.

A complete line of Pittsburgh Products of the following types is available through our numerous branches in leading cities:

PITTSBURGH GLASS PRODUCTS

Polished Plate Glass
Pennvernion Window Glass
Carrara Structural Glass
Ornamental Glass
Pittsburgh Mirrors

PITTSBURGH PAINTS

Sun-Proof Paint
Wallhide Paint
Waterspar Enamel
Waterspar Varnish
Florhide Enamel

PITTCO STORE FRONT METAL

See Sweet's for complete specifications, and for addresses of Pittsburgh Plate Glass Company branches.

Be sure to see the Pittco Store Front Caravan, now on a nation-wide tour. Contact our local branch for specific information as to when it will visit your territory.

Pittsburgh Plate Glass Company,
2202 Grant Bldg., Pittsburgh, Pa.

Please send me, without obligation, your new book entitled "Producing Bigger Profits with Pittco Store Fronts."

Name.....
Street.....
City..... State.....

Gar Wood

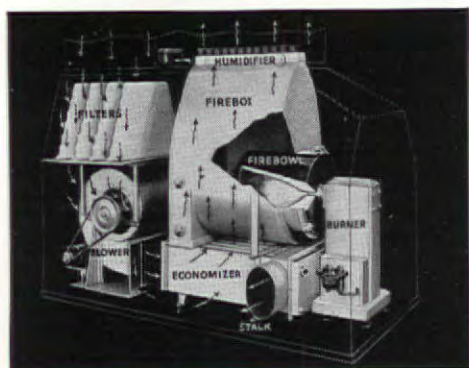
AUTOMATIC HEAT and Air Conditioning

FUEL SAVINGS ALONE would make it PLAN-WORTHY!

The Gar Wood Tempered-Aire system continues to be the outstanding achievement in the residential air conditioning field. Its astonishing economy of operation is largely due to the Economizer working in coordination with the blower.

The Economizer is located between the fire box and the stack outlet. Cold return air is discharged at high velocity by the blower into the spaces between the Economizer tubes, extracting the heat from the hot gases coming from the fire box. Thus the air is pre-heated and prepared for its final complete extraction of heat as it passes upward, around the big, "tear-drop" fire box.

- Washable cloth air filters
- Silent blower
- Economizer
- Giant tear-drop fire box
- Co-ordinated burner
- Humidifier
- "AIR DUX" duct system



Tempered-Aire is the only air conditioning system engineered and built complete from burner to ducts, in one factory. All parts are designed to work together. It is the only equipment that combines a high efficiency oil burner, tear-drop fire box and a multiple tube Economizer with the counter-flow principle of heat extraction. You can safely specify Gar Wood Tempered-Aire!



Canadian Distributors:
Engineering Industries, Ltd., Leaside, Ont.

Air Conditioning Division
GAR WOOD INDUSTRIES, INC.
DETROIT, MICHIGAN

(Continued from page 56)

Good Housekeeping Magazine devoted six feature illustrated stories, January, February, March, September, October, and November 1936, some in color, to this house...

Right design, good construction, equipment, and decoration, are fundamentals, but the right sponsorship which commands public confidence and respect is equally important in our judgment...

John McC. Mowbray, Roland Park, Baltimore, Md.: As a general practice, we believe in the policy of exhibiting furnished houses, not because it is a particularly desirable merchandising plan but [because] as a developer of large acreage it can be used to secure for us considerable general advertising at low cost...

In answer to a National Association of Real Estate Boards' questionnaire, reported in *Freehold*, Mr. Mowbray added: There is no question, however, that even the sightseers, if favorably impressed, give the development good advertising.

We take the automobile license numbers so that we have a fairly complete record of all who attend. These can be followed up by the salesmen and the curiosity seekers eliminated.

It is very seldom that a furnished house does not sell before the expiration of the exhibition. We are able to sell surrounding property in many cases to those visitors who come to a model house.

We have recently adopted a policy of charging admission to model houses to help defray the expense and eliminate numbers of children as well as individuals who have no interest. The admission charge runs between ten cents and twenty-five cents, depending on the character and location of the house.

Guy W. Ellis, also reported in *Freehold*, asserted in rebuttal to Mr. Mowbray:

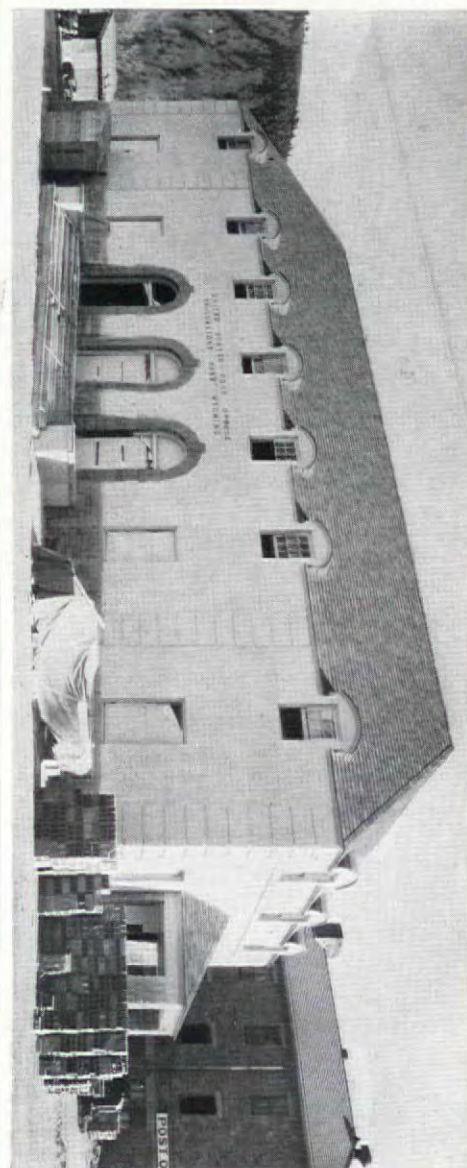
Here in Miami Beach, a few years ago, it was the practice to hold houses open for inspection. Many new homes were being built, and while they were not all model homes, they were of attractive architecture, and in varying price ranges. However, so many were held open for inspection that it demoralized our market completely. Thousands of curiosity seekers went through these houses, much to the confusion of any real prospective purchasers. With everything open, the prospective purchasers went through all of them, and after they had seen a large number of houses in the higher-priced brackets, they were not satisfied with the cheaper type house which they could afford. The practice turned the general public away from the brokers' offices and sent them "curb shopping." The result of the "no open houses" agreement has been most beneficial.

Pecora Paint Company Inc.
Member of Producers' Council, Inc.
Established 1862 by Smith Bowen
MORTAR STAINS • SASH PUTTIES • SECTION MASTICS
Fourth & Venango Sts.
PHILADELPHIA, PA.
For further details see Sheet's Catalogue or write direct to us



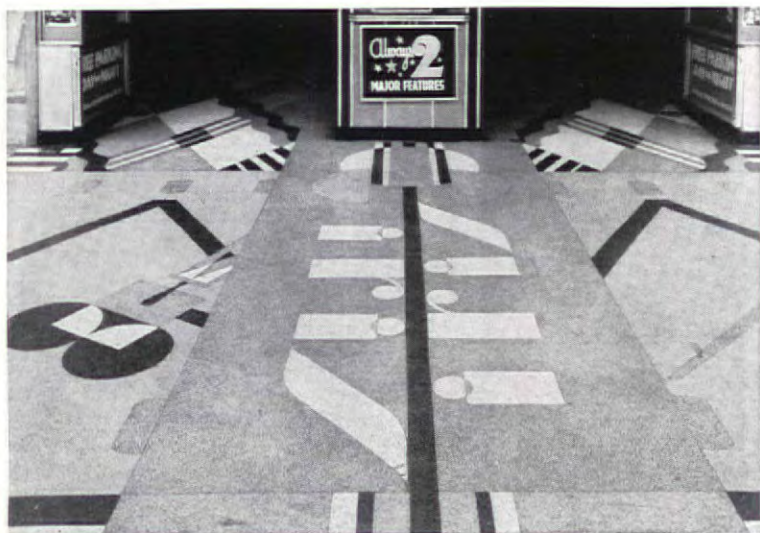
For fuel conservation and temperature control, caulk all window and door frames, and tuck point masonry, with Pecora. Properly applied, it will not dry out, crack or chip. Uniformly dependable.

CAULK all Joints



Terrazzo offers All Four

1. DURABILITY 2. BEAUTY 3. ECONOMY 4. EASY MAINTENANCE



This movie theater sidewalk has to take constant punishment from heavy foot traffic. Being terrazzo, it takes punishment beautifully—and *stays* beautiful year after year.



With an eye to economy as well as beauty. Terrazzo floors are durable, inexpensive to maintain—easy to keep clean.



Striking floor design of terrazzo in a Buffalo clothing store. Note the variation of pattern and texture. Each unit is clean-cut, distinct—each has life and freshness.

● Whatever the application, you are sure to get faithful execution with terrazzo. . . rich textures for homes and churches, strong colors and striking patterns for stores and public buildings, brilliant contrasts for theater lobbies.

And when you consider that

terrazzo offers *everything* desirable in a flooring material, including economy, is it any wonder that its use is growing so rapidly? For detailed information write the National Terrazzo and Mosaic Association, 1406 G Street, NW, Washington, D. C.



"Dignity" says this simple floor design. With terrazzo you design exactly to your needs . . . in patterns and color combination which precisely fit your motif.

THE NATIONAL TERRAZZO AND MOSAIC ASSOCIATION

Comfort Conditioned BY DUNHAM



THE COMMODORE
New York City

Sub atmospheric Steam HEATING

Through silent circulation of steam, matched in temperature to precise weather requirements—Commodore guests...as do occupants of all Dunham "Comfort-Conditioned" buildings...enjoy ideal warmth no matter how widely or rapidly winter weather changes. They are comfortable in frigid "snaps"...equally comfortable in mild "spells"...and during mild periods they are never exposed to the stifling over-heating effect of "pressure" steam.

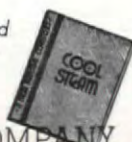
Dunham Sub-atmospheric Steam Heating—subject to manual control for the moderate size building, full-automatic for the larger project, contributes in addition to the tangible value of Comfort, an important financial aspect. For this system...in all weathers...without variance...performs at a hitherto unattainable degree of economy.

Many Vacuum Return line systems as was the Commodore have been Comfort-Conditioned by Dunham without replacement of steam source, piping or radiation.

May we send the interesting brochure "Cool Steam?"

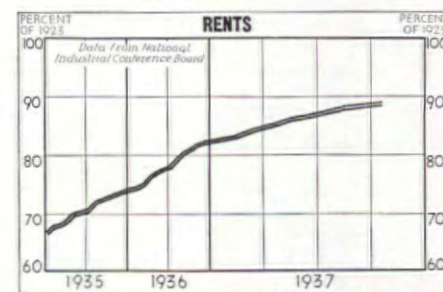
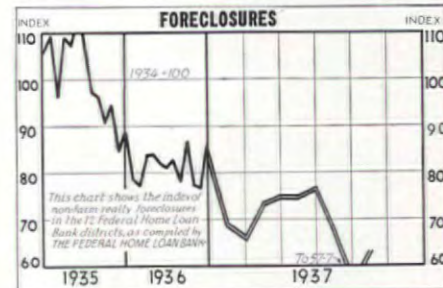
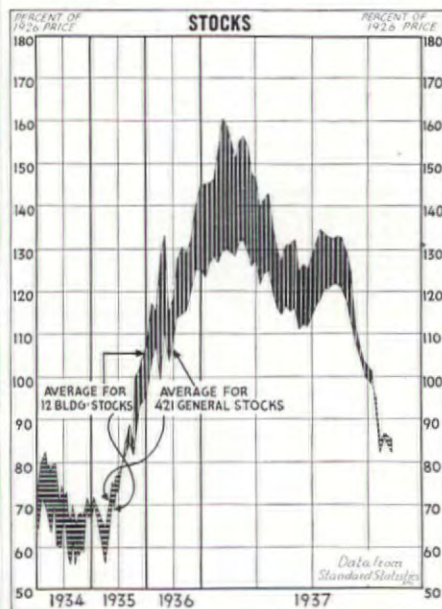
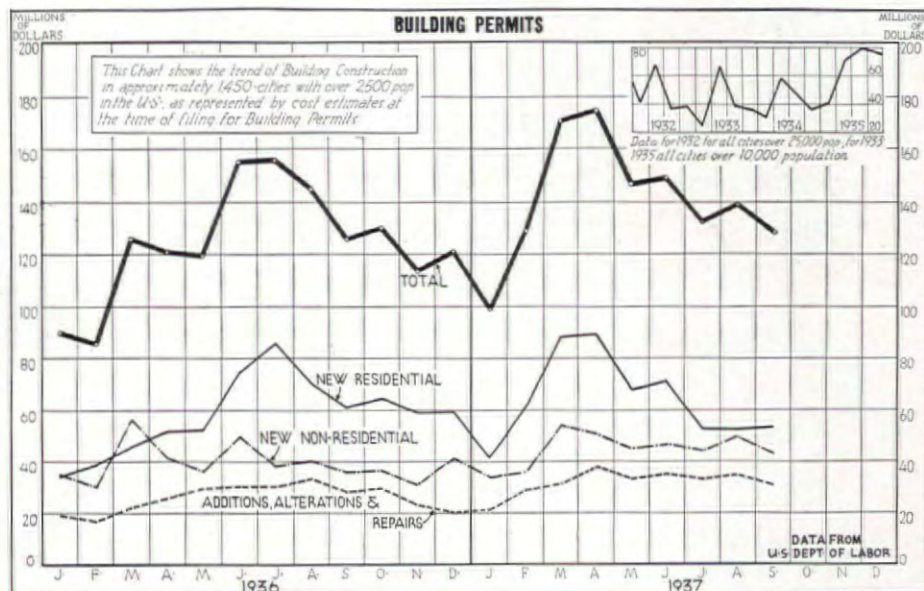
Consult the Architect for good design and the Consulting Engineer for mechanical equipment.

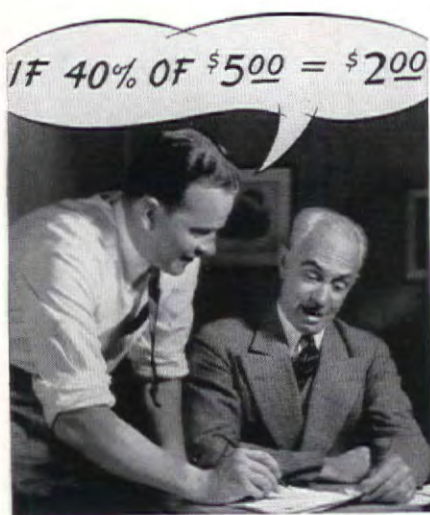
C. A. DUNHAM COMPANY
450 EAST OHIO STREET, CHICAGO



BUILDING STOCKS TUMBLE

as material prices level off. Building permits continue in contraseasonal slump.





-Then We Should Buy **MODEX** POWDER CASEIN PAINT

Art: "I've looked into this casein paint deal, Mr. Jones."

Mr. J: "Yes—I'm sold on using casein."

Art: "Well—the first thing in buying is to get a fair basis of comparison."

Mr. J: "That's right."

Art: "Federal Specifications have been established, so we'll take those."

Mr. J: "What's the best buy?"

Art: "That's simple. There's a big saving in Modex, the powder casein paint."

Mr. J: "Why is that?"

Art: "You don't pay for water or costly lead-lined containers."

Mr. J: "Sounds reasonable—what's the actual saving?"

Art: "From 25% to 40%."

Mr. J: "I'm sold—we'll use Modex."



THE REARDON CO.
St. Louis • Chicago • Los Angeles

MODEX
CASEIN PAINT IN POWDER FORM

TWIN TWINKLES

Your Money—Not Your Life

Bus Driver: "Madam, that child will have to pay full fare. He is over five years of age."

Madam: "But he can't be. I have only been married four years."

Bus Driver: "Never mind the true confessions; let's have the money."

Colors Go Modern

The "New Yorker" reports that a printing ink company has named one of its colored inks "Expectant Mother Green." This shade seems to be missing from the lineup of Modex Tempera Colors but the range of twelve gay vivid tones supplies the sweeping demand for brilliant colors in interior decoration. All the advantages of Reardon's Modex apply to Modex Tempera Colors.

Such Extravagance

Mrs. Goldberg and Mrs. Silverstein were gossiping over the back fence.

"I heard it today dot Abie Kasinsky vos keeping a budget."

"Vot!—und his wife, too?"

Start Cement Floors Right

Cement floor surfaces can be successfully painted with paint, varnish or enamel if properly prepared. The ideal primer is two coats of Reardon's Venostone which seals, hardens, neutralizes and waterproofs in one operation, forming a protective film which alkali and moisture cannot penetrate. Note, however, that Venostone's job is to arrest dampness and moisture—not to hold back the seepage of water when there is sufficient pressure behind it to force it through wall or floor surfaces.

Showing Good Form

Pretty Young Thing: "Are you sure these curtains won't shrink? I want them for my bedroom windows."

Candid Clerk: "Lady, with your figure, you should care—you should care."

Good-Bye Mr. Kalsomine!

With the coming of R. W. K. (Reardon's Washable Kalsomine) old-fashioned kalsomines took a back seat. Because it requires no priming coat, R. W. K. costs less per job than regular kalsomine and offers the important advantage of giving a permanent finish that's washable.

Ho Hum!

Teacher: "If you subtract 16,000 from 700,000 what's the difference?"

Johnny: "Yeah, I think it's a lot of foolishness, too."

Ends Headaches from Plaster Cracks

Try as you will, it's a discouraging job to paint over walls with ugly plaster cracks in them. There's a new idea that's rapidly becoming popular. First fill the cracks with Reardon's Resurf. Second, blank stock the wall with wallpaper. Third, paint right over the paper with any shade of Reardon's Modex. This treatment works like magic—gives a soft, pleasing pastel effect at low cost.

"All Out—Lady!"

She was a good little girl as far as good little girls go, and as far as good little girls go, she went.



To Keep Stucco Buildings from **"CATCHING COLD"** Use **BONDEX**

WATERPROOF CEMENT PAINT

When stucco buildings get old, the outer walls become porous and the water seeps in. Then the building is apt to "catch cold." The walls start to sweat and the floors stay damp—a most unhealthy condition. To waterproof, weatherproof and beautify stucco and masonry, nothing equals Bondex, the paint eternal used the world over.

BONDEX for Leaky Basements, Too



Damp leaky basements can be made into useful playrooms like this with Bondex. One treatment does the work. 18 colors and white to choose from.

Send for Bondex illustrated folder.

THE REARDON CO. St. Louis • Chicago • Los Angeles

BONDEX
WATERPROOF CEMENT PAINT

LUPTON

MICHAEL FLYNN MFG. CO.

For years LUPTON has been recognized by Architects and Better Builders everywhere as the name that pioneered quality Steel Windows. Today, the MICHAEL FLYNN MANUFACTURING CO. maintains this same high standard as it continues the manufacture and sale of these approved Lupton Casements and Industrial Window Products. Architects who know and want Quality and Service always specify—"LUPTON—a better steel window"



SEND for catalog of HIGH STANDARD Specifications

MICHAEL FLYNN MANUFACTURING CO.

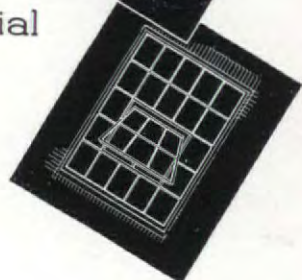
Successors to David Lupton's Sons Co.

Allegheny Ave. and Tulip St., Philadelphia, Pa.

Residence



Industrial



WINDOW GLASS
The Revealer

Just as glass reveals thousands of twinkling lights shining through the windows of buildings at night, so does it reveal scenes of beauty to delight the eyes. The quality of glass with which windows are glazed fulfills or defeats one of their most important functions, that of clear vision. To assure clear vision and the maximum of light transmission, consider one pane windows, and . . .

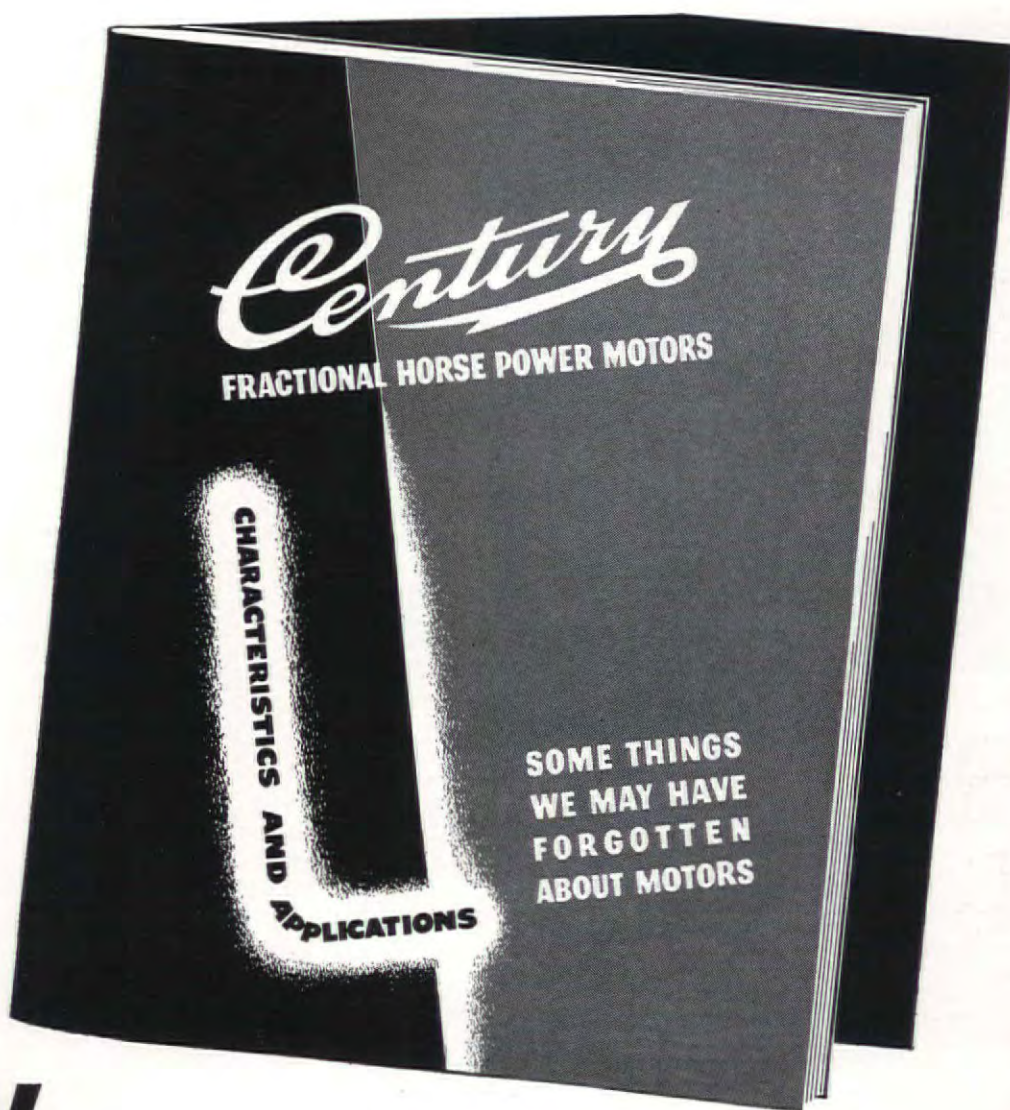
SPECIFY

Clearlite
SHEET GLASS
A QUALITY

EASY ON THE EYES
FOURCO GLASS COMPANY
General Offices—CLARKSBURG, W. VA.
Branch Sales Offices—NEW YORK • CHICAGO • FT. SMITH, ARK.



THIS
BOOK
tells..



HOW *to* **SELECT the RIGHT MOTOR**

This New 24-page book will be of real assistance to you... Here is presented in helpful form information concerning the electrical characteristics of all types of Fractional Horse Power Motors—and suggestions as to how they can be most effectively applied to meet the requirements of motor-driven machinery and appliances operating in normal or abnormal surroundings... Fully illustrated... Send for your copy, if you have not received it... **ASK FOR BULLETIN 1039-F** ...

CENTURY ELECTRIC COMPANY

1806 Pine Street

St. Louis, Mo.

Offices and Stock Points in Principal Cities



U P T O 6 0 0 H O R S E P O W E R

Help prevent these crimes!



Investigate the DICTOGRAPH DOORMASTER!

● The DICTOGRAPH DOORMASTER insures the safety of housewives and children by protecting them from strangers who seek admission by ringing the doorbell. Every caller may be identified from inside the house before the door is opened. Recommend it in all your plans for new and remodelled homes.

DICTOGRAPH DOORMASTER may also be installed to connect any part of the house with any other. The housewife can save many tiresome trips up and down stairs. She can, for example, talk to the kitchen, game room, nursery, etc., without leaving her room. The DICTOGRAPH DOORMASTER is neither a new-fangled gadget nor a "modern inconvenience". It is a necessity for easy, comfortable and safe living.

Not only is the initial cost of the DICTOGRAPH DOORMASTER well within your clients' means, but its operating cost is little more than that of an ordinary doorbell. And it provides a mark of distinction for the homes you plan, adds an attractive feature that makes them stand out above others.

For illustrated folder describing the Dictograph Doormaster in detail write to Dep't. AF.

DICTOGRAPH PRODUCTS CO., Inc.
580 FIFTH AVENUE :: NEW YORK CITY

● Wall-type hand-set — for use in kitchens, garages, etc.



● Combination microphone and loud-speaker nesting in entry doorjamb.



● Attractive table-type hand-set for living room, bedroom, etc.



IT KEEPS OUT
UNDESIRABLES
AND PROVIDES
EFFICIENT,
ECONOMICAL
INTERIOR
COMMUNICATION



FORUM OF EVENTS

(Continued from page 14)

trailer house . . . as a permanent housing proposition . . . is open to considerable and deeply rooted skepticism." But the neatest idea of the year in low-cost housing was the posthumous trick pulled by Publisher George A. Laughlin of Wheeling, W. Va., who left money in his will to provide half-price homes for needy and fertile families, gave orders that his plan should be brought to the attention of other rich and public-spirited persons.

Newest structural idea was that of veteran Frank Lloyd Wright who demonstrated to skeptical building authorities that a concrete column 22 ft. high with only a 9 in. diameter-base, when reenforced with a wire mesh cone instead of the usual rods, would bear 60 tons after 7 days, although architect Wright's plans required it to carry only 12 tons. The year brought forth no outstanding new structural products, but wall insulation got into the public's head, even if in some of the model houses it got no further than the glass-covered wall section. Even more people used glass brick. "Air conditioning" was on the way to become a selling point, as shown by the batch of new machinery put before the confused builder. Two typical items: an anthracite boiler of magazine type using horizontal rather than vertical combustion, and a one-pipe hot water heating system. And whereas two years ago there was not more than one concrete building per year erected east of the Rockies, in 1937 there were more than 500. You can now buy fireproof paint—at \$2.50 a gallon. You can now also buy the esoteric pleasure of a mural which can only be seen by black light in the dark.



COVERED WAGON trailer flouts AMA, APWA, ASPO, NAHO.



ANTHRACITE Industries magazine boiler burns coal horizontally.

BUILDINGS. More than 145,000 small houses were roofed in and sold during the course of the year, which is almost all the consolation provided by building for the Prophets of Boom. Building managers were still trying to fill seven-year-old mammoths, so that American Radiator & Standard Sanitary's six-story Manhattan addition was something to write up, the completion of a new 36-story Rockefeller Centre unit something to crow about.

Corning's self-advertisement pushed into Fifth Avenue and also into E. B. White's *New Yorker* column. The Bronx continued to perpetuate its own gaudy and congested version of the modernistic apartment house, while Harrison & Fouilhoux turned some few of the Rockefeller millions into New York's most civilized modern apartments whose rents persuaded many that New York civilization was still a long way off. But for their children hopes were more frequently bright; many new public schools were seen to let in more and more sunlight, to do without more and more pillars. The Kansas City Auditorium turned out to be almost as windowless and considerably more distinguished than Mr. Hershey's chocolate factory. New York's Liquor Commission decided



ROCKEFELLER Apartments, civilized living for N. Y.—at a price.

(Continued on page 66)

WALGREEN INSTALLS CARRIER for World's Largest Drug Store

Carrier Air Conditioning

New \$1,000,000 Miami store 78th of Walgreen
main to provide patrons with Carrier Comfort



1. "WHAT A STORE!" say visitors to Walgreen's, Miami—and with good reason! With five floors and 49,000 square feet of floor space, it's the largest, most unusual drug store in the world!



FACTS: Seated at the 80 foot, streamlined four- or at the countless booths and tables, 700 patrons can be served simultaneously from the kitchens in this mammoth store. **MORE FACTS:** Regardless of the weather outside—all 700 will be comfortable. Year 'round, the Carrier System automatically controls the temperature, removes oppressive humidity, and provides positive circulation of clean, fresh air throughout the building.

SHIP AHOY! Here's the basement of the new Walgreen super store, decorated in true nautical style, where customers can lounge, make reservations for deep sea fishing. Like the upstairs store, "weather" is perfect—kept that way by Carrier, the same system used in 77 other Walgreen stores throughout the country.



Take a Tip from the Leaders!

● When a great organization like Walgreen's installs Carrier Air Conditioning year after year, in store after store, you can be pretty sure about two things: First, that Carrier Air Conditioning is a *profitable* investment—one that pays good returns by increasing sales, by reducing store spoilage. Second, that Carrier Air Conditioning equipment is *dependable*—can be counted on to do its work in a satisfactory manner, with a minimum of attention.

And why *shouldn't* Carrier Air Conditioning be dependable? Behind every Carrier installation regardless of size—is the knowledge gained through devoting more than 35 years exclusively to air conditioning—the experience gained through making installations in 99 countries of the world—in every conceivable type of structure.

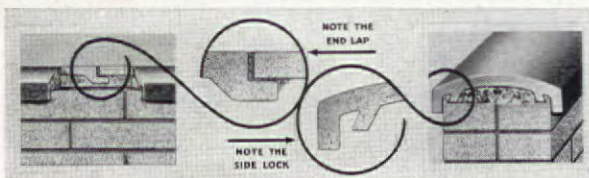
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FORUM OF EVENTS

(Continued from page 64)

that the International Casino's spiral bar satisfied the letter of their laws, and out in Des Moines a Mr. Earl Butler built himself a 5-story house with ramps which he claimed to be proof against fire, tornadoes, earthquakes and termites, was fitted with more comfort-making machinery than any other house so far built.

Not so well safeguarded was William Paxton's Crystal Palace, that huge pre-fabricated glasshouse, which provided London with the year's most spectacular pyre, the architectural world with its most notable loss. Industrial designers continued to deck out their own offices with glass block, thus giving the architects one more lesson in the way to sell themselves. Henry Dreyfuss finished the first standard pattern Western Union office. Gilbert Rohde took time off from his furniture designing for Herman Miller to revamp one floor of Halle's Cleveland store. But his neighbors refused him permission to put up a modern house in Manhasset. Walter Dorwin Teague took time off from his work on New York's World Fair to convert a 19th-century Paris house into one of Mr. Ford's slickest show rooms. That architects can design show rooms was demonstrated by Landefeldt & Hatch for Crane & Co. in Manhattan. But Norman Bel Geddes was 23 years ahead once again with his design for a Shell Oil Co. City of 1960 unkindly compared to his stage sets.



Wide World, London
CRYSTAL PALACE, a
pyre for Paxton.



Ehrenford
WALTER DORWIN
TEAGUE converted a
Paris house to Fordism.

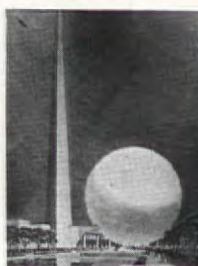
FAIRS. In Paris, *L'Exposition des Arts et des Techniques appliqués à la Vie Moderne* was even less near completion at opening date than international fairs normally are. In spite of the plans having been radioed to Paris, the U.S. pavilion was among the last to be completed, almost as undistinguished in design as the British. In order that good Germans should have no reason to cross the Rhine, the Nazis put together a wispy little show at Dusseldorf designed to emphasize the skill of Germans in creating new synthetic materials, which turned out to be those familiar to American architects for many years past.

While Grover Whalen tirelessly signed contracts in the glare of flash bulbs, Harrison & Foulhoux's design for the New York World's Fair symbol added a composite, trylon, to the dictionary. The Administration Building found a place amongst the contractors' huts on the rat-infested wastes of Flushing, already spotted with full-grown trees (some of which it was later alleged had been stolen from Connecticut parkways).

San Francisco impatiently prepared to celebrate the "Forty-Niners" with a 1939 fair staged in the hangars of their new trans-Pacific terminal airport. And last year's fairs kept bravely at it with bigger, gaudier and more vulgar



HARRISON & FOUL-
HOUX created the
World's Fair trademark.

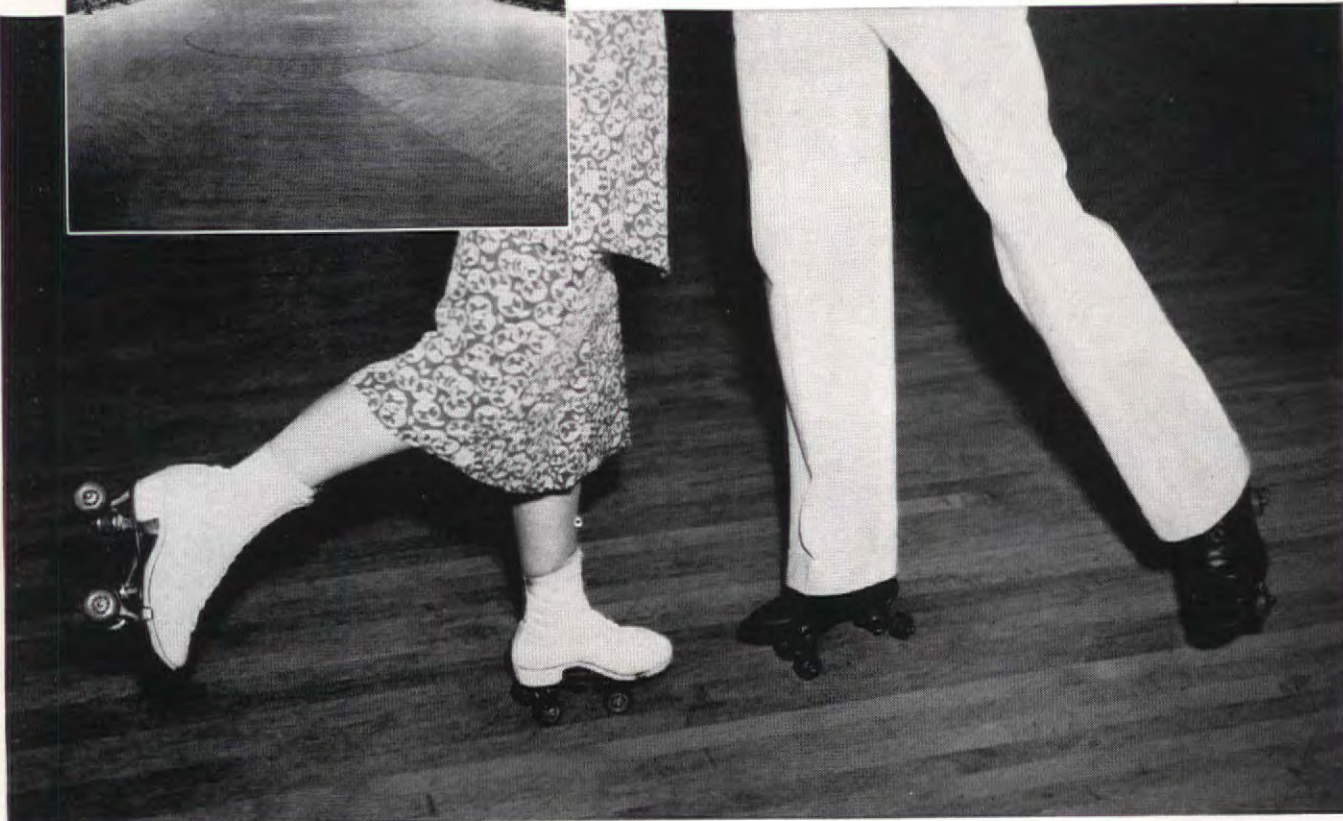


TRYLON and perisphere

(Continued on page 68)



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"The Hard Maple floor at our White City rink was laid in 1917 and used practically every day since... Nearly 10,000,000 skaters have used this floor in the past 20 years.

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FORUM OF EVENTS

(Continued from page 66)

spectacles which could be considered educational only to minors. Cleveland's Great Lakes Exposition hired Billy Rose to stage their aquacade. Dallas stepped up the title of their show to The Greater Texas & Pan-American Exposition, a Cavalcade of the Americas replacing last year's Cavalcade of Texas. Between the signing of World's Fair contracts Grover Whalen found time to say: "There will also be a great amusement and recreation center, which will duplicate neither Broadway nor Coney Island. New York will supply something new . . . something fresh, clean, better than we have known . . ." a form of words echoed by Broadway's Minsky Bros. when they reopened after Commissioner Moss' strip-tease ban.

FINE ARTS' MEMORIALS. Most lavish news of the year was provided by Andrew Mellon with his \$9 million Washington museum to house his \$19 million collection of Old Masters. Texas' fiery Congressman Maverick considered the gift a Trojan horse, saw a perpetual ban on Modern Art's admittance in the Acceptance Bill phrase: "no works shall be exhibited unless they are of similar high standard of quality as those of the donor." Architects set up a howl when it was revealed that Architect John Russell Pope's plans for the gallery would give Washington just another Hadrian's temple with a couple of wings added. Hadrian's temple without the wings was Architect Pope's bitterly disputed scheme for the Jefferson Memorial, the opposition to which gained a very large popular following by centering not on the architecture but upon the threatened destruction of some of Washington's famed cherry trees.

Another of Architect Pope's designs, a memorial column 175-feet high, was dedicated at Montfaucon (Aug.), added \$500,000 to the sums already spent on useless reminders of the last war. On the other hand a bill appropriating the same amount for a memorial monument to Will Rogers at Claremore, Okla. was vetoed by the President "in large part because of my personal friendship for him." But Mining Tycoon Spencer Penrose went right ahead and put up a floodlit Gothic tower on the top of a Colorado mountain "in memory of the cowboy philosopher." Fantastically enough it was the movie industry which chose to honor his memory with a hospital.

Public-spirited Banker Jules S. Bache turned over his Fifth Avenue house and its valuable Old Masters to the public. Banker Solomon Guggenheim, on the other hand, turned his millions to something even more modern than Modern—Abstract Art. But rich Mrs. Frank Granger Logan published "Sanity in Art," a muddled attack on Modern Art; and Hitler opened his new House of German Art at Munich, which proved, however, only one quarter as popular as the special exhibition of "degenerate" art in a neighboring building.

(Continued on page 70)



A.P., Harris & Ewing
HADRIAN'S TEMPLE for Mellon (top) and Jefferson (below).



A.P.
JOHN RUSSELL POPE, more than \$9,000,000 on his desk at death.



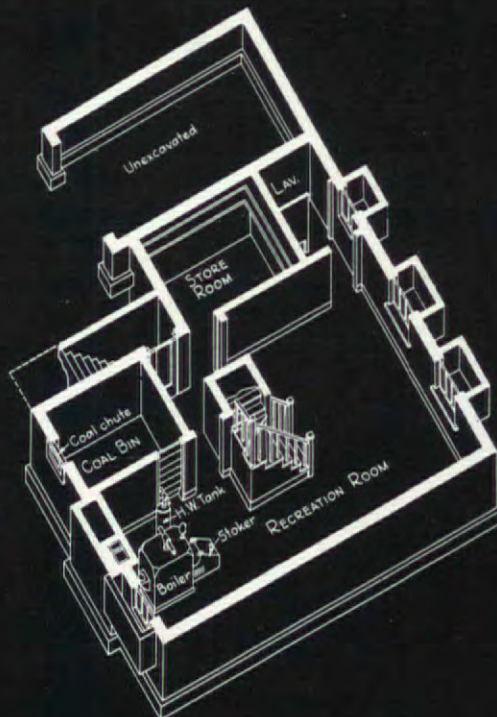
A.P.
WILL ROGERS earned a floodlit tower.

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BASEMENT PLANS FOR MODERN
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The fundamental principle of designing for modern bituminous coal or coke heating is to keep driveway, coal storage and heating unit as close together as possible. How this can be done so as to provide abundant basement space for other utility or recreational purposes is shown in detail in our portfolio of "Six Typical Basement Designs for Modern Bituminous Coal Heating," A. I. A. file 30-G. A copy will be sent you, without obligation, if you will fill out the coupon and mail it to either of our offices.



1 Convenience: With modern bituminous coal, your clients can have the amount of convenience for which they wish to pay at the lowest cost of any fuel. Boilers, furnaces and bins for hand-firing can be so designed that labor is reduced to a minimum. Automatic firing is available either through hopper feed stokers requiring a few minutes' attention once a day, even in the coldest weather, to the fully automatic bin feed stokers.

Economy: Modern bituminous coal is the lowest fuel in first cost, the cheapest by far to burn. Tremendous unmined supplies scattered throughout the country insure plenty of fuel in the future, which means that your clients will not face rising prices due to imminent shortages of supply.



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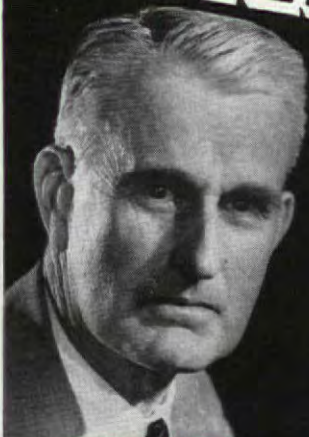
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FORUM OF EVENTS

(Continued from page 68)

To house such "degenerates" the Museum of Modern Art in New York was starting to build an extremely "degenerate" new home designed by Philip Goodwin and Edward D. Stone. Brooklyn spruced up its old home and Syracuse was pleased to move out of the Public Library into a remodeled brownstone. Chicago's Jubilee Art Show, on the other hand, was too extensive for any such confinement, was housed on the quarter mile long Navy Pier. Thoughtful promoters had a Chevrolet sedan ready to tote weary critics up and down the gallery on opening day.



HITLER houses Aryan art behind pillars in Munich, while **THE MUSEUM OF MODERN ART** prepares to shelter "degenerate" art behind glass in New York.



SCHOOLS AND COMPETITIONS. Biggest news of the year in architectural and near-architectural education was made not by Americans but by immigrant Europeans. Most important single appointment was that of ex-Bauhaus head Walter Gropius to Harvard's School of Architecture, where he was later joined by ex-Bauhaus teacher Marcel Breuer. Ex-Bauhaus teacher Laszlo Moholy-Nagy, housed in Marshall Field's vast *fin de siècle* mansion at Chicago, attempted to perpetuate the German school's doctrine: "not to propagate any style, system, dogma or vogue, but simply to exert a revitalizing influence on design, . . . to see the vital spark of life behind life's ever-changing forms." Meanwhile WPA's Design Laboratory, founded by Designer Gilbert Rohde on Bauhaus principles, abandoned by the Government due to lack of funds, was taken under the wing of the forward-looking Federation of Architects, Engineers, Chemists and Technicians.



Rea Hardy, Jr.
L. MOHOLY-NAGY brings the Bauhaus to fin-de-siecle Chicago.

Most conspicuous amongst the year's batch of competitions, and most heartening for the modern-minded critic was that sponsored by the Pittsburgh Glass Institute. It also served to show that there are more uses for glass brick than even the makers thought. In contrast to the \$5,000 offer by the American Institute of Steel Construction for the design of an elevated vehicular highway was the prize of \$100 offered by James Blauvelt for the furnishing of an apartment living room in "Modern American," at a cost of less than \$3,000, for a "self-made man and his family." Harnischfeger Corporation, on the other hand, awarded \$1,000 to Charles H. & Arthur H. Schreiber for the design of a house "to satisfy the essential needs of an American workman's family."



Wide World
CHARLES D. MAGINNIS chosen to preside over AIA's 1938.



Fred Toy
WILLIAM L. HUTCHESON still controls AFL building labor.

PEOPLE. With annual regularity new Association presidents were elected—Charles D. Maginnis to the AIA, Ralph Walker to the Architectural League, Henry R. Kinsey to the Savings Bankers, Everett B. Murray to National

(Continued on page 72)

ARCHITECT BUILDS HOME FOR DAUGHTER



Above: The charming home that Fred Manley, Architect, built for his daughter in Lindbergh Forest, suburb of Knoxville, Tenn. Completely and permanently insulated with a doublewall of Celotex (Sheathing and Lath)

**Assures Year-'round Comfort and
Cuts Cost by Building with Celotex
Guaranteed Cane Board Insulation**



Below: Manley home under construction, showing brick veneer going up over Standard Celotex Insulating Sheathing. Note that the large Celotex boards meet on the studs in tight, wind-proof joints. They stop wind infiltration, even around pulley sockets.

Knoxville, Tenn.: In building this attractive country home for his daughter, Fred Manley, Architect, doubly insulated it with Celotex—at only a little more than the cost of uninsulated construction! By specifying Celotex he provided permanent insulation—for Celotex is protected against termites and dry rot by the patented Ferox Process (exclusive)—and backed by the Written Life-of-Building Guarantee*.

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MAKERS ALSO OF PELLA VENETIAN BLINDS

PELLA ROLSCREENS

FORUM OF EVENTS

(Continued from page 70)

Association of Building Owners and Managers, George Gove to the National Association of Housing Officials, A. D. Fraser to the Mortgage Bankers Association, Joseph W. Catharine to the National Association of Real Estate Boards. William L. ("Big Hutch") Hutcheson, perennial president of the Brotherhood of Carpenters, although stretched on the floor by CIO's John L. Lewis two years ago, reconfirmed his hold of the AFL building unions at their Denver convention.

European experts could be found on many a U.S. campus; Gropius and Breuer at Harvard, Behrendt at Buffalo, Raymond Unwin at Columbia. Mies van der Rohe was brought over to devise a Wyoming ranch house, and Dr. Hans Heymann brought his system of Property Life Insurance to comfort nervous building owners.

The U.S. Government put Nathan Straus into the spotlight by choosing him as the first Housing Administrator. He began by announcing his intention of spending \$526 million as fast as possible. New York's energetic Park Commissioner Robert Moses was slated to head the new City Planning Commission, and Mrs. Irene DeBruyn Robbins was appointed first official decorator to the more than 200 U.S. embassies and consulates abroad. The first murals to depict the Duke and Duchess of Windsor appeared in the bar of Sacramento's neo-Spanish Hotel Senator, and George de Chirico was commissioned to do a mural for the swank Fifth Avenue branch of Schneider Bros., thus provide for U.S. tycoons an atmosphere of culture appropriate to the purchase of \$250 suits.

NHA (National Housing Association) folded up; DSA (Designers of Shelter in America) was born, an organization which proposed to unite but has already itself divided. The New York Chapter of the AIA grappled with Governor Lehman, Judge Scheiberling and Colonel Greene over the right of the State Architect's Office to design the proposed War Memorial and garage at Albany, until it was eventually discovered that there was no building to design, later found itself in a fight with Red-hunting Senator McNaboe, sponsor of a bill which would deprive architects in private practice of anything but advisory work on public projects.

Death came within a single day to Architect John Russell Pope and to his wealthiest patron, Andrew Mellon. In March it struck down Dr. John Nolen, town planner and landscape architect; in August Victor Alexandre Frederic Laloux, for nearly 50 years a professor at the Ecole des Beaux Arts and thus responsible for training many of the old-line American architects. Death came also to Robert Graham, who was said to have participated in the construction of more buildings than any architect since Sir Christopher Wren. Painter Maurice Utrillo, listed as deceased by London's Tate Gallery, proved himself much alive by suing the Gallery for libel.

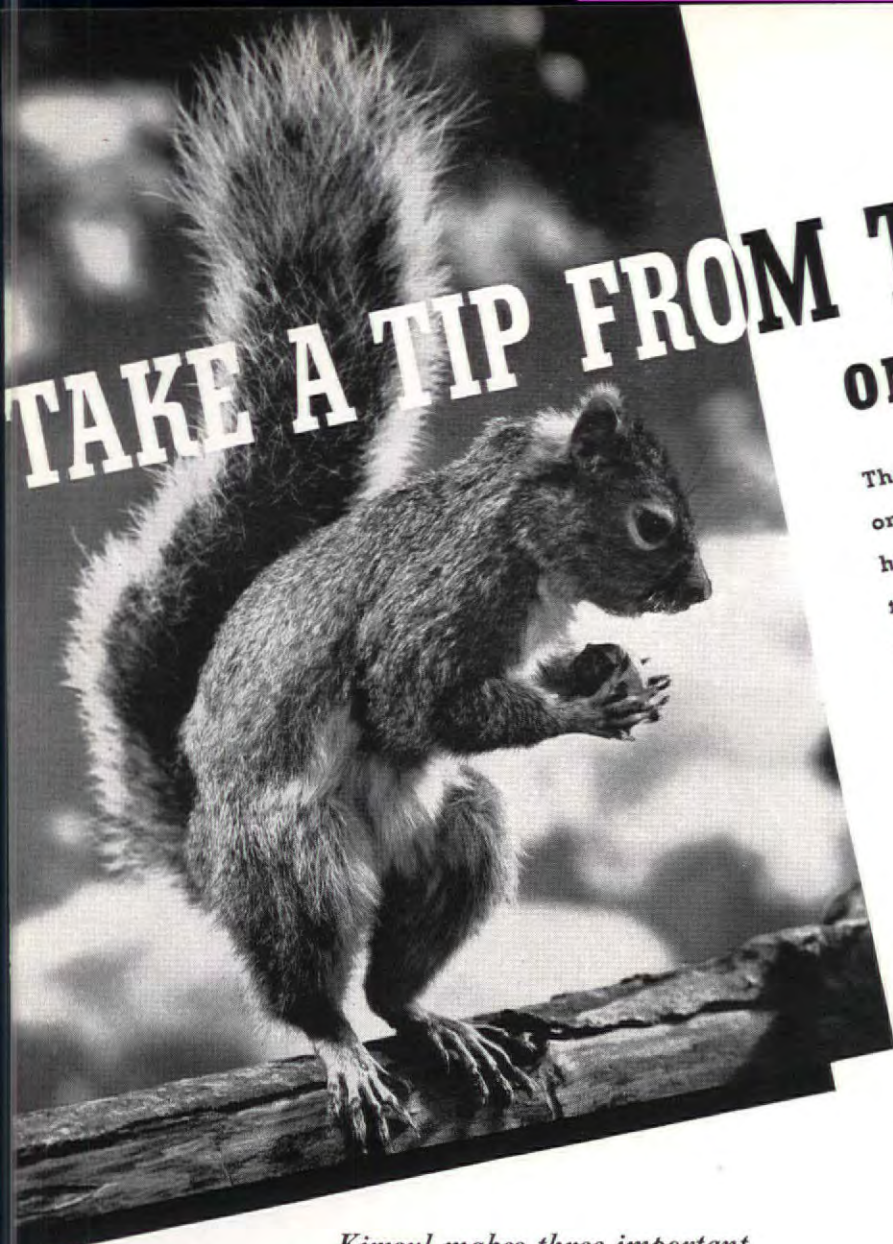
YEAR'S END. Perhaps prompted by the date, Franklin Delano Roosevelt declared an armistice on business and gathered around him eight bigwigs to hatch a home building program which by common consent was the last line to stay another depression. Thus hope is born anew that houses will rise in abundance and that there will be much for the Duke to see if and when he resumes his American itinerary.



Rev Hardy, Jr.
DR. HANS HEYMANN
came to comfort nervous building owners.



Acme
NATHAN STRAUS, U.S.
Housing Administrator,
to spend \$526,000,000



TAKE A TIP FROM THE SQUIRREL ON CONSERVING HEAT

The squirrel's tiny heart and lungs are the only heating plant he has, yet they keep him warm in sub-zero weather, because the squirrel is wise in the ways of insulation. He conserves his heat by burrowing into the bole of a tree where he is protected from the cold by wood fibres.

REDUCE HEATING PLANT REQUIREMENTS BY USING KIMSUL

Today the findings of research workers in the field of building insulation are confirming the canniness of the squirrel's instincts. For in actual installations, as well as laboratory experiments, there is convincing evidence that the savings in heating plant requirements and fuel consumption effected by any good insulation are quite materially increased by using Kimsul, the modern creped wood-fibre insulant.

Kimsul makes three important contributions to insulating effectiveness and economy

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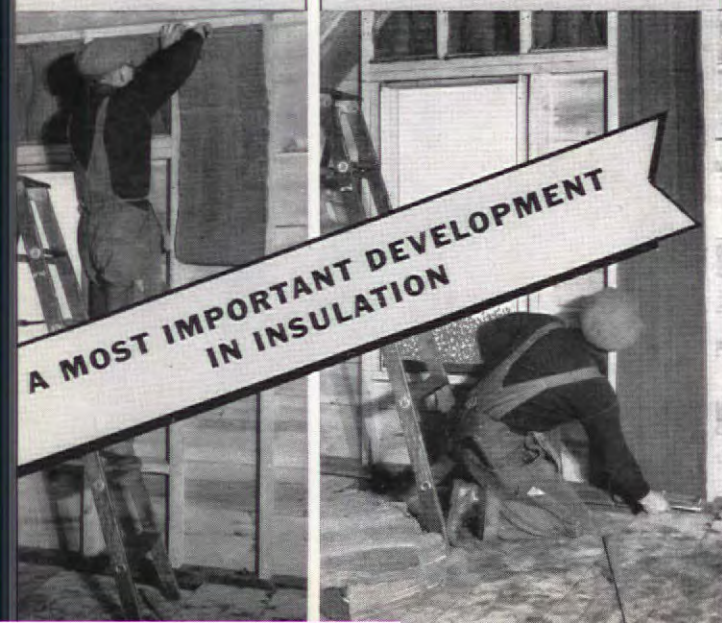
Its wood fibres are bound together with asphalt, so it will not settle nor disintegrate. Non-toxic chemicals make it resistant

to fire, vermin, fungi and moisture. So it is *permanent*.

3 The unique feature of expandability (described below) simplifies and speeds up the work of installing, considerably reducing its "installed-on-the-job" cost.

NAIL IT ON
AT TOP

PULL DOWN LIKE A
SHADE AND FLUFF



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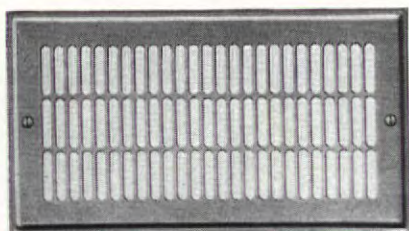


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AUER DISTINCTIVE **REGISTERS**
& GRILLES  For Air Conditioning and Gravity

FORUM OF EVENTS

(Continued from page 72)

DEATHS

WILLIAM MALCOMSON, architect, 84, at his home in Detroit, Mich.

Born in Hamilton, Ont., he moved to Detroit at the age of four and received his early education in the city. Mr. Malcomson's first important work was the completion of the old Detroit Water Works pumping station and water tower, after the death of the architect originally commissioned for the buildings. After a few years in the office of Mortimer L. Smith he entered business for himself, designing the Young Women's Home.

In 1890 he and William E. Higginbotham formed a partnership. During the thirty-three years of their partnership, the firm designed about three-quarters of Detroit's school buildings.

Mr. Malcomson helped to organize the Michigan Society of Architects and was its second president in 1916-17. He was a member of the Detroit Chapter of the American Institute of Architects and in 1926 was elected a Fellow of the Institute.

PROFESSOR FREDERICK W. REVELS, 70, died at his home in Syracuse, N. Y.

A native of Randolph, N. Y., he graduated from Syracuse and became an instructor in the Department of Architecture. In 1902 he was made a full professor. Shortly afterward, on the retirement of Edward H. Gaggin, he succeeded him as director of the Department of Architecture and continued in that capacity until his illness in 1935.

Professor Revels was not only widely known as an educator, but also as the architect of many of the University's buildings. In collaboration with Professor Earl Hollenbeck, he designed Lyman Hall of Natural History, Bowie Hall of Chemistry, Carnegie Library, Archbold Gymnasium and Sims Hall, men's dormitory. He and Professor Fred R. Lear were the architects for the University Methodist Episcopal Church.

He organized an architectural course at the University of Puerto Rico in 1922, while on a leave of absence and the next year received the degree of Master of Architecture from the University.

Professor Revels was a member of the American Institute of Architects and was made a Fellow in 1930. He was a past president of the Syracuse Society of Architects.

PERSONALS

L. MURRAY DIXON, architect, announces the removal of his office to 1630 Euclid Ave., Miami Beach, Fla.

Andrew R. Morison, A.I.A., and **Cornelius L. T. Gabler, A.I.A.**, announce the partnership of Morison & Gabler, architects, 616 Murphy Building, Detroit, Mich.

Samuel M. Kurtz, architect, announces the opening of an office for the practice of architecture at 1170 Gun Hill Road, Bronx, N. Y., and would appreciate catalogues of building products.

John Monteith Gates, architect, and **Geoffrey McNair Gates** announce the opening of offices at 1 East 53rd St., New York City.

Jones, Roessle, Olschner & Wiener, architects of Shreveport, La., are opening a branch office in the James Building in Ruston, La., and will be pleased to receive catalogues and technical data from manufacturers.

George G. Miller, architect, announces the removal of his office to 67 West 44th St., New York City.



ARCHITECTURALLY SPEAKING

by OTIS ELEVATOR COMPANY

If you have visited Monticello, you may have noticed the dumbwaiter that Thomas Jefferson had built into his residence, more than a hundred years ago. In these days, activities are more widely scattered (recreation-room, dining-room, sun-deck, etc.), home life is more varied, convenience is now a necessity rather than a luxury, and an automatic electric dumbwaiter receives the hearty approval of many home owners. We find many residences are now being equipped with one or more electric dumbwaiters.

★ ★ ★

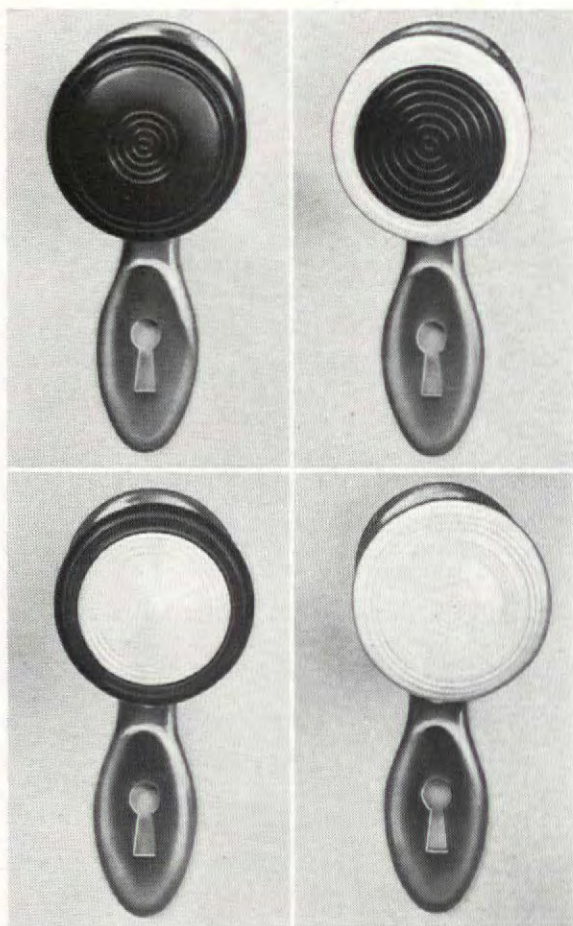
And the home elevator is by no means a luxury in many homes where it has been recently installed, because it fits into the scheme of things in present-day standards of home convenience and comfort. And many architects, in planning modern larger residences, are either specifying a Personal-Service Elevator, or providing a hoistway for future installation of an elevator. When the elevator is not installed at once, the hoistway is usually floored over temporarily to form a tier of closets. A hoistway about 4'4" wide and 4'6" deep inside is a good average size; but it is best to get a standard Otis layout and check the overhead clearances and other dimensions.

★ ★ ★

During the last ten years the total number of hospitals in the United States has decreased somewhat, while the average size has increased about 50%. We don't know what this proves except that as hospital buildings grow larger, elevators deserve more and more consideration. Automatic Finger-Tip Control is now practically standard hospital equipment; but careful consideration must also be given to the *type* of automatic control, as well as to micro-leveling, automatic door operation, and other features that provide more efficient elevator service.

★ ★ ★

Speaking of Finger-Tip Control—the patient or visitor who rides to the hospital in a 1938 model streamlined automobile, and then steps into a 1908 model manually operated bird-cage elevator, has every reason to doubt the efficiency of the rest of the hospital equipment. An architect who is planning any hospital modernization work should bear in mind that 92% of all *new* hospital elevators have automatic control. The comparatively easy change to automatic elevator operation should, therefore, receive careful consideration if the building is to be brought really up-to-date.



Patrician

ALL-PLASTIC KNOBS

in Colorful Assemblies

Extending the use of colorful plastics in distinctive builders' hardware, Lockwood now offers shallow knobs of all-plastic construction with metal shanks in any standard hardware finish. The knob body and top are available in four attractive designs and in various colors, including black, ivory, chinese red and several lovely pastel tones. Knob bodies, with tops of the same or contrasting colors, are readily interchangeable to harmonize with varied decorative schemes. These knobs are highly resistant to abrasion and stain, will not work loose, and retain their lustrous colors.

Write for detailed information or let us send a representative with samples.



LOCKWOOD
HARDWARE MFG. CO.

Fitchburg, Mass.

Division of Independent Lock Co.

PRODUCTS and PRACTICE

(Continued from page 26)

Available in a variety of patterns, types, and sizes too numerous to describe here, glass blocks made in this improved way are today an established material of modern building. Translucence without visibility, light with little heat transmission, sound insulation, and low maintenance (they require no finish) are their big talking points, and it is to be expected that as architects become more and more familiar with their proper use their present popularity will continue to increase.



Interior partitions, Owens-Illinois "Insulux" glass blocks



Harold E. Waltz

"Louvrex" glass, Blue Ridge Corp., Libbey-Owens-Ford, distributors

GLASS FIBER INSULATION

Glass fiber insulation is composed of long, flexible fibers of "spun" glass, made by forcing molten glass through minute orifices, combined in a well-felted mass resembling cotton batting, but possessing the permanence and chemical characteristics inherent in glass. Advantages of the material include

(Continued on page 80)

KOPPERS

WOOD PILES

Pressure-treated with Creosote

Prove Most Economical for Building Foundations

Pressure-treated creosoted piles on one of the 22 plant yards of The Wood Preserving Corporation.

Pressure-treated Creosoted Yellow Pine Piles being sunk for the Brownsville, Texas, Postoffice.

Brownsville Postoffice being erected on pressure-treated creosoted piles.

AF-12

KOPPERS COMPANY PITTSBURGH, PA.

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- ☐ Coal Tar Pitch and Felt Roofing
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Pressure-treated creosoted Yellow Pine piles for building foundations are economical in first cost and are durable, dependable and satisfactory. Creosoted piles used in many installations over a period of 40 years have proven their permanence.

These photographs show the Postoffice at Brownsville, Texas, where 690 Yellow Pine Piles, pressure-treated with 15-lbs. of Distillate Creosote per cubic foot, were supplied by The Wood Preserving Corporation, a Koppers subsidiary.

The Wood Preserving Corporation is in a position to quote on wood piles for prompt treatment and shipment from its plants located throughout the country.

THE WOOD PRESERVING CORPORATION A Subsidiary of KOPPERS COMPANY

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*Now..Heat
Basement
Recreation
Rooms
this easier
way..*

this
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circulates heat

At last!—an easy solution to the heating problem in basement recreation rooms. The Heatilator Fireplace warms the entire room uniformly and quickly—draws the cooler air from the floor level, heats it and returns it to far corners. No unsightly pipes or ceiling radiators mar the beauty of the room.

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To ARCHITECTS
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HEATING, COOLING AND AIR-CONDITIONING EQUIPMENT FOR INDUSTRIAL, COMMERCIAL AND RESIDENTIAL APPLICATION

STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION, ETC., REQUIRED BY THE ACT OF CONGRESS OF MARCH 3, 1933, OF THE ARCHITECTURAL FORUM, published monthly at Jersey City, N. J. for October 1, 1937.

State of New York }
County of New York } ss.

Before me, a Notary Public in and for the State and county aforesaid, personally appeared Henry A. Richter, who having been duly sworn according to law, deposes and says that he is the Business Manager of THE ARCHITECTURAL FORUM and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management, etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, embodied in section 411, Postal Laws and Regulations, printed on the reverse of this form, to wit:

1. That the names and addresses of the publisher, editor, managing editor, and business manager are: Publisher, Time Incorporated, 135 East 42nd Street, N. Y. Editor, Howard Myers, 135 East 42nd Street, N. Y. Managing Editor, Ruth Goodhue, 135 East 42nd Street, N. Y. Business Manager, Henry A. Richter, 135 East 42nd Street, N. Y.

2. That the owner is: Time Incorporated, 135 East 42nd St., New York, N. Y.; that the names and addresses of stockholders owning or holding one per cent or more of total amount of stock are: Brown Bros. Harriman & Co., 59 Wall Street, New York, N. Y.; J. P. Morgan Company, (a/c Henry P. Davison), P. O. Box 1266, New York, N. Y.; F. DuSossolt Duke, Green Farms, Conn.; Mrs. Mimi B. Durant, c/o National City Bank, 167 E. 72nd Street, New York, N. Y.; General Publishing Corporation, 15 Exchange Place, Jersey City, N. J.; William V. Griffin, 140 Cedar Street, New York, N. Y.; Irving Trust Company, (Benefit of Elizabeth Bunch Pool), 1 Wall Street, New York, N. Y.; New York Trust Company, (a/c Edith Hale Harkness), 100 Broadway, New York, N. Y.; New York Trust Company, (a/c William Hale Harkness), 100 Broadway, New York, N. Y.; Louise H. Ingalls, c/o D. S. Ingalls, 1637 Union Trust Bldg., Cleveland, Ohio; Robert L. Johnson, 135 East 42nd Street, New York, N. Y.; Margaret Zerbe Larsen, 135 East 42nd Street, New York, N. Y.; Roy E. Larsen, 135 East 42nd Street, New York, N. Y.; John S. Martin, 135 East 42nd Street, New York, N. Y.; Samuel W. Meek, c/o H. A. Schafuss, c/o Chas. D. Barney & Company, 14 Wall Street, New York, N. Y.

3. That the known bondholders, mortgagees, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are: None.

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(Signed) Henry A. Richter,

Business Manager

Sworn to and subscribed before me this 24th day of September, 1937.

[SEAL]

HERBERT E. MAHONEY,
Notary Public

(My commission expires March 30, 1938)

Traffic doesn't mar the beauty **OF THIS RUBBER TILE FLOOR**



FIBRE REINFORCEMENT CHECKS DENTING AND ABRASION IN ARMSTRONG-STEDMAN RUBBER TILE FLOORS

NOW you can specify a rubber tile floor that will retain its rich beauty under heavy traffic. Armstrong-Stedman Rubber Tile resists denting and wear because it is made with an invisible interwoven reinforcement. This exclusive feature also prevents buckling or "crazing" due to movement of wood subfloors.

You'll find greater depth and beauty of coloring in Armstrong-

Stedman Reinforced Rubber Tile because the fibre reinforcement prevents the graining from "running wild" during manufacture. Forty handsome colors in marble, paisley, and two-tone effects make it easy for you to create interesting inset designs.

Armstrong - Stedman Reinforced Rubber Tile is quiet and comfortable. Maintenance is easy and economical. Costly refinishing is never required.

Long-lasting floor beauty is provided by Armstrong-Stedman REINFORCED Rubber Tile in this smart reception room of Batten, Barton, Durstine, and Osborn, Inc., New York City. Color is Black Red No. 673.

6-23

For complete data, see "Sweet's Catalog" or write today for file-sized booklet, "New Beauty and Comfort in Floors." Armstrong Cork Products Co., Building Materials Division, 1604 State St., Lancaster, Pa.

Armstrong makes the only full line of resilient floors: Rubber Tile, Linoleum, Cork Tile, Accotile, Linotile.



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STOPS OVERHEATED WATER

*Reduces
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**POWERS Hot
Water Tank Regulator**

**Ends
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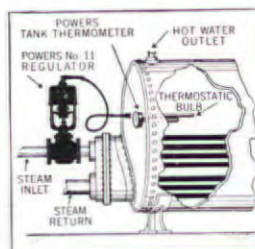
Pays back its cost several times a year

OVERHEATED water causes complaints, wastes fuel — shortens life of valves and plumbing fixtures and increases deposit of lime in pipes. • Powers regulators will help to reduce these losses. Install them on your hot water heaters. They keep the water at the right temperature. Fuel savings alone often pay back their cost several times a year. As they usually last 10 to 15 years they pay big dividends. *Write for Bulletin 2035.*

The Powers Regulator Co. Offices in 45 Cities. See your phone directory. 2735 Greenview Avenue, Chicago; 231 E. 46th Street, New York City; 1808 West 8th Street, Los Angeles.

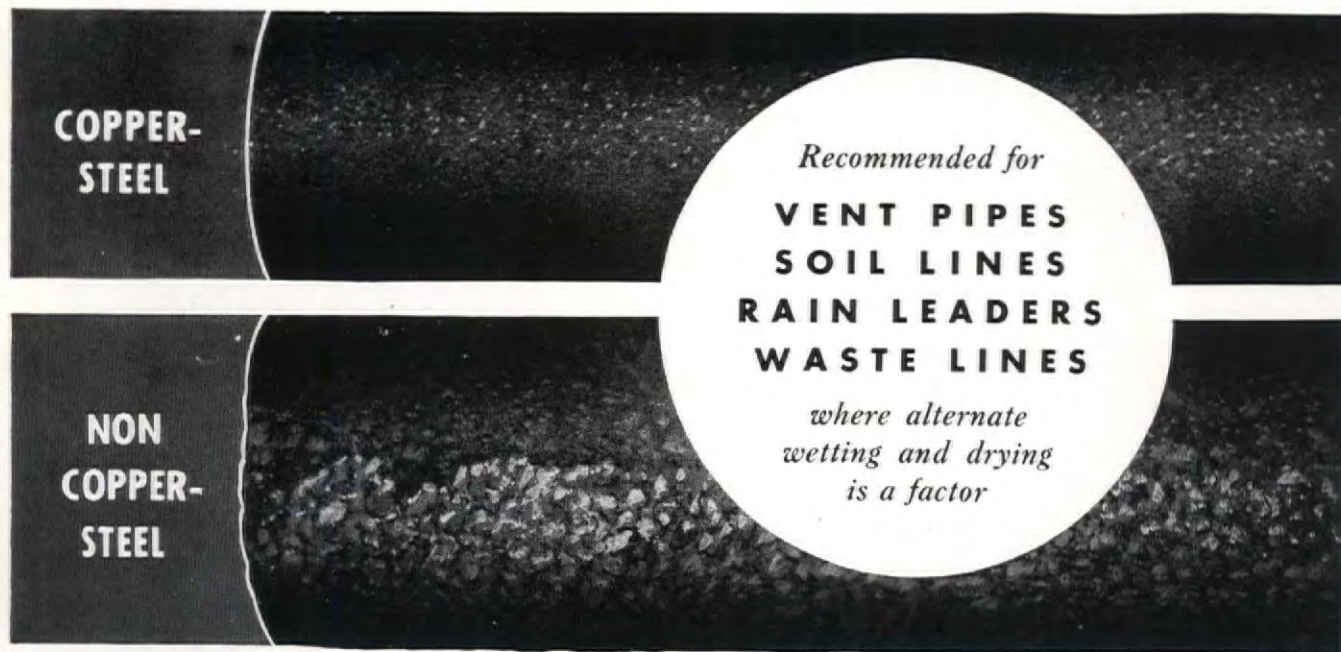
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WATER TEMPERATURE CONTROL



Here's Proof That

NATIONAL COPPER-STEEL PIPE LASTS 2½ TO 5 TIMES LONGER



Recommended for

**VENT PIPES
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*where alternate
wetting and drying
is a factor*

LOOK at the difference between these two pieces of pipe after seven years' exposure. Practically no deterioration of the copper-steel pipe.

To check corrosion loss and keep replacement costs to a minimum, architects, engineers, and builders are using NATIONAL Copper-Steel Pipe for lines subject to alternate wet and dry conditions. Its cost is low—only a few dollars a ton more than non-copper-steel pipe.

In the table at the right are the results of actual service tests. They speak for themselves.

Class of Service	Location	Duration of Test	Indicated Life of Copper-Steel Pipe over Non-copper-steel
Vent Pipes	New York	4 years	532%
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Copper-Steel pipe also outlasts non-copper-steel in steam-return lines.			
Steam Returns	New England	9 years	249%
Steam Returns	6 U. S. Cities	10 years	240%

Write for Bulletin No. 11, which reports other interesting tests — gives added proof that NATIONAL Copper-Steel Pipe stubbornly resists atmospheric corrosion and saves money in the long run.

LOOK FOR THE GREEN COLOR

National Copper-Steel Pipe is identified as follows:

Black Pipe — Small sizes, colored green. Large sizes, two green stripes running lengthwise. Galvanized Pipe — All sizes, two green stripes running lengthwise.

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UNITED STATES STEEL

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CHEMISTS at Berry Brothers have perfected a radically new type wood sealer that completely obsoletes *all* previous finishes of this kind! Because its countless features introduce important finishing innovations, you will want to learn the facts about Granite Floor Seal. It's 98% waterproof—penetrates wood completely—absolutely will not mar! It's exceptionally fast-drying—a perfect finish in itself, or an ideal base for varnish or wax. You can actually apply two coats of Granite Floor Seal in a single day—and use the floors next morning!

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Granite Floor Seal has withstood the severest wear in homes, schools, large buildings and auditoriums throughout two years of testing! It solves the problems of gymnasium floor finishing especially well. For example, Granite Floor Seal positively will not "heel burn". Won't discolor the lightest woods. And the non-porous surface provides a more sanitary playing area because there's no place for germs to lodge! That's why you can also recommend it for hospitals, chemical and pharmaceutical laboratories and plants! A test of Granite Floor Seal under ordinary working conditions will quickly reveal its easy-handling characteristics. Write for complete details about this amazing new finish today. No obligation. Simply address:

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PRODUCTS and PRACTICE

(Continued from page 76)

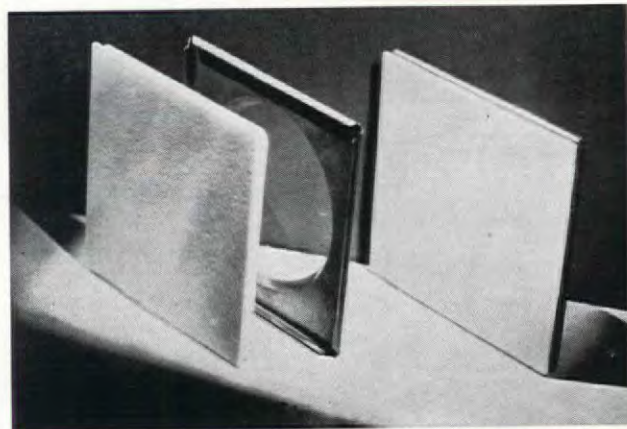
the fact that it is absolutely free from impurities, is stable, fireproof, and not affected by moisture or attacked by vermin. It is available in the regular bat, strip, and nodulated forms and in standard sizes for use between wood studs and joists. Weight is 1½ lbs. per cubic foot in bat form and 2 lbs. per cubic foot for the nodulated form. Insulation value: .266 Btu's per square foot, per degree F., per hour, per inch thickness at 70° F.



Owens-Illinois "Dustop" air filter

GLASS FIBER AIR FILTERS

Glass fiber air filters consist of a series of felted glass fiber mats of graduated fiber diameter and density, coated with a viscous substance and confined by expanded metal grilles in a fiberboard frame. Standard units are 20 x 20 x 2 in. for plane bank mounting, 20 x 25 x 2 in. for V-banks, weigh about 2 lbs. each.



Glass tile used in ceiling, Mid Town Hudson Tunnel. Picture shows metal "gripper," tile, and assembly. Modern Glass Construction Co.

ULTRA-VIOLET INTERCEPTING GLASS

Because fading, discoloration, and disintegration of ink, paper and parchment are thought to result largely from the action of ultra-violet rays, a new glass, opaque to light of this kind but transparent to visible light, has recently been developed and put on the market. Intended mostly for the protection of valuable documents kept on public exhibition, it should prove valuable in museum and similar work. Tests indicate that printed matter protected by this glass fades

(Continued on page 84)

FOR SATISFIED CLIENTS

Specify **G-E** **WIRING** **MATERIALS**

Your clients want wiring that will operate satisfactorily for years. If some of the materials you specify break down or cause trouble in any way, you will be blamed. Your own reputation for quality work will suffer.

Why take chances? Specify G-E Wiring Materials. Their quality is unquestioned. The line is complete, offering materials for any type of wiring job. Moreover, General Electric Wiring Materials are designed to be used together. With these materials, make-shift installations can be avoided which are sometimes necessary when ordinary materials are used or when the materials are of different manufacture and don't fit together nicely.

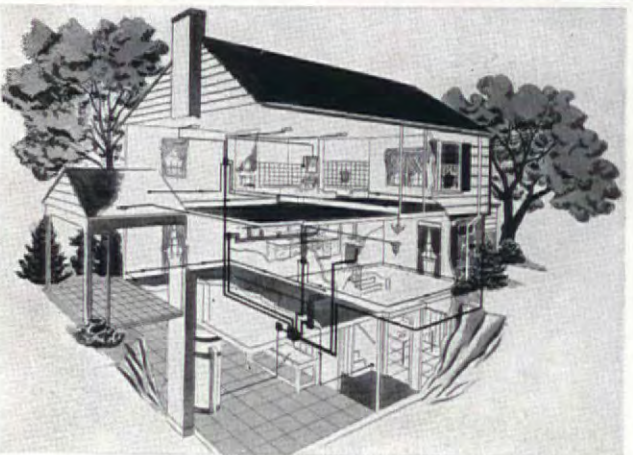
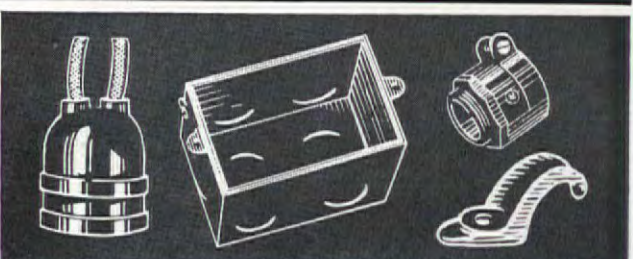
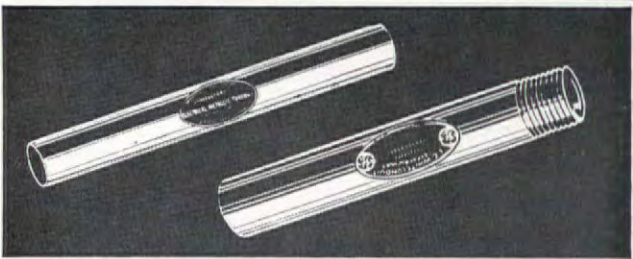
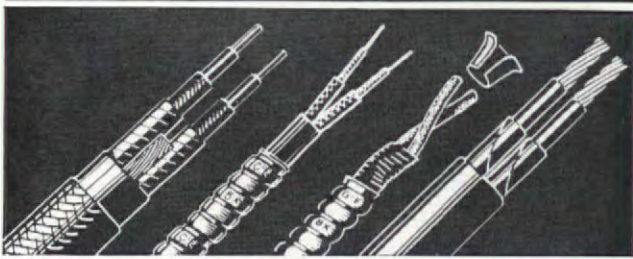
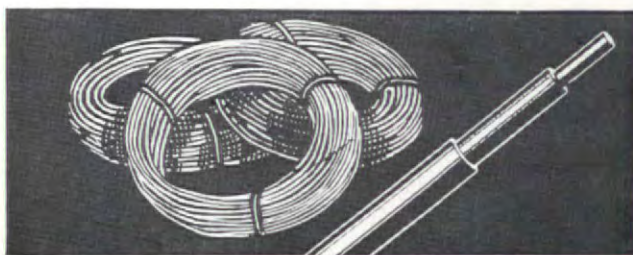
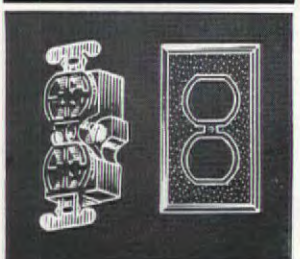
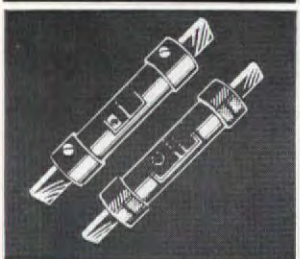
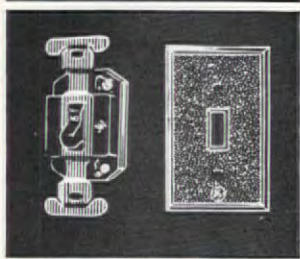
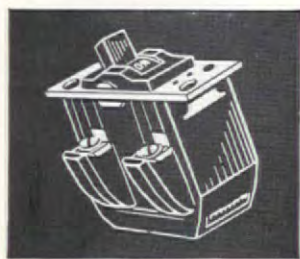
For further information about G-E Wiring Materials, including G-E White Electrical Conduit, G-E Flame-retarding Building Wire and G-E Wiring Devices, see Sweet's 1938 Catalog for Architects, Time Saver Standards, or write to Section CDW-7512, Appliance and Merchandise Department, General Electric Company, Bridgeport, Connecticut.

FOLLOW G-E HOME WIRING RECOMMENDATIONS
G-E Home Wiring, adaptable for all types of houses, assures adequate installations. Write today for Manual.

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Azrock Carpet Tile is as durable as its name, capable of withstanding long years of hard and constant usage. Its beautiful colors penetrate the entire thickness of tile for permanence. A gentle resilience adds to walking comfort and reduces noise. Maintenance is simple and inexpensive. Azrock is smooth-surfaced, will not warp nor check and its micro-close joints, cut by a new process to micrometer accuracy, leave no room for dust catching. Azrock is fire-proof when laid on concrete and serves as fire-retarder on inflammable types of sub-floor. Marks of burning cigars and cigarettes are easily erased in cleaning. Moisture proof, Azrock can be installed on sub-floors below grade without the necessity for expensive waterproofing. Azrock can be laid on any firm, smooth sub-floor (wood, concrete, marble, steel, ceramic tile, old or new) without costly underlayments. Choose from a rainbow array of colors and different sizes to create your own design.

**Write to Uvalde Rock Asphalt Co.
for name of your nearest distribut-
ing contractor.**

Photos by Hedrich-Blessing



... the name behind a floor of distinction

The manufacturers of Azrock Carpet Tile, The Uvalde Rock Asphalt Co., are one of the oldest and largest producers of limestone rock asphalt in the United States. In successful operation since 1912, this company has built an enviable record not only for the quality of its manufacture but for the character of its personnel. Interwoven, then, with the sturdy texture and distinctive beauty of Azrock Tile is the reputation of one of the greatest names in the asphalt industry. When you specify Azrock for floor coverings, you specify quality, beauty . . . and *character!*

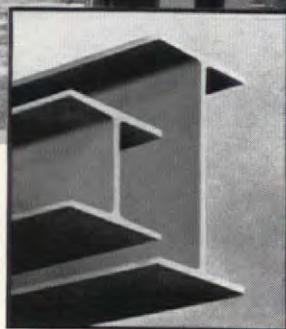
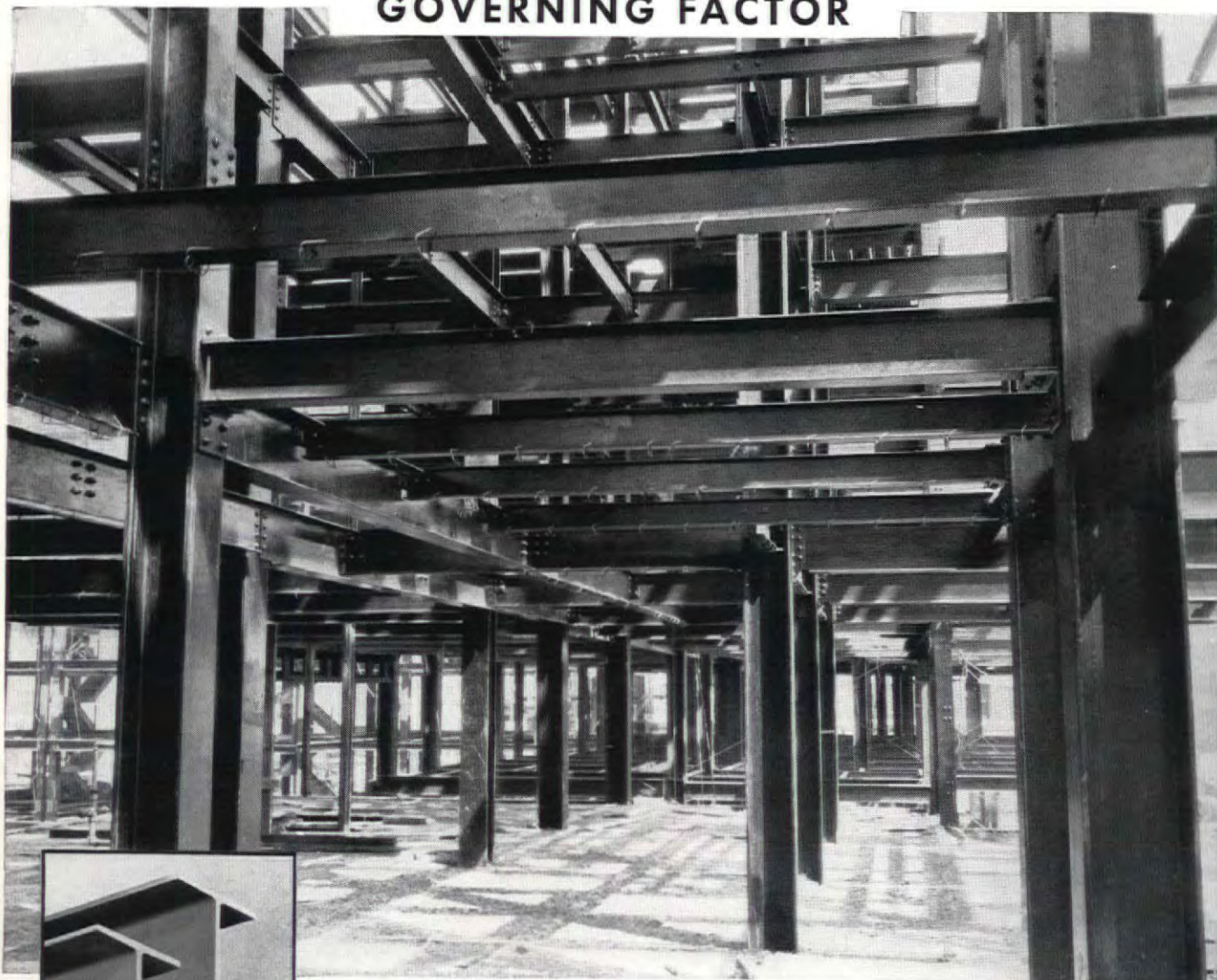
OTHER AZROCK PRODUCTS

Azrock Industrial Tile

Azrock Planktile



When DEFLECTION *is the* GOVERNING FACTOR



BETHLEHEM *Light* SECTIONS

BETHLEHEM Light Sections may be used effectively in any part of a structure where loads are less than the capacity of heavy sections of depth dictated by the span. They find frequent application in floor construction and in all types of upper tier work.

Although Bethlehem Light Sections are light in weight for their depths, the thickness of metal in both flange and web makes them eligible for use in all first-class construction, conforming with all building code requirements. Rolled to essentially the same shapes and dimensions as the regular heavier sections, Light

BRING SAVINGS

Sections are fabricated and handled in the same way and create

no special engineering or designing problems.

In apartment buildings, hotels, office buildings, hospitals and similar structures, Bethlehem Light Sections keep floor slab thickness within economical limits without using more steel than called for by the load. In addition to their utility in floor construction, Bethlehem Light Sections are widely used as spandrel beams, columns in upper stories, struts between columns and as purlins in roof construction, particularly of industrial buildings.

BETHLEHEM STEEL COMPANY



ILGETTE

Kitchen Ventilator

FOR SMALL KITCHENS



with all the ILG Exclusive Features

Especially designed and priced for small kitchens, the new Ilgette Kitchen Ventilator has all the Ilg exclusive features including the fully enclosed, self-cooled motor and the Ilg one name plate guarantee. Attractively and harmoniously finished, this new Ilgette truly glorifies the kitchen; it's the last word in home modernization, an essential feature for the home of today. Sign and mail coupon for specific information.

ILG ELECTRIC VENTILATING CO.
2899 NORTH CRAWFORD AVENUE, CHICAGO, ILL.



VENTILATION
and Air Conditioning

MEMO — Send me specific information regarding the Ilgette Kitchen Ventilator as follows: _____

Name _____

Full Address _____

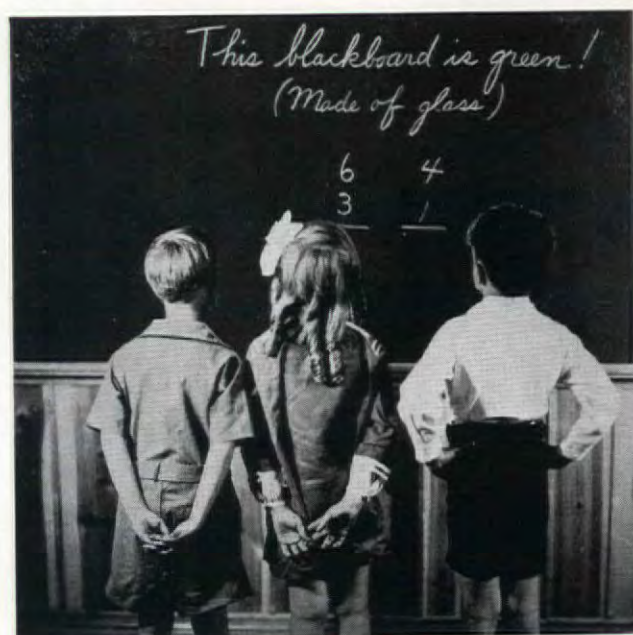
PRODUCTS and PRACTICE

(Continued from page 80)

and discolors much more slowly than that under ordinary glass, although perceptibly faster than similar matter kept in complete darkness. Ultra-violet intercepting glass is not visually distinguishable from ordinary glass, and is installed in the regular manner.

COLORED MIRRORS

Increased use of mirrors for decorative and utilitarian purposes has led to a revival of interest in colored mirrors of various kinds. Color variations in mirrors are produced by varying the material used as the metallic reflective coating and by employing colored glass. The metals commonly used to coat mirrors include silver, lead sulphide, gold, and—less frequently—copper and aluminum or aluminum magnesia. Thus without varying the type of glass used, it is possible to produce slightly bluish mirrors with silver (the standard mirror), dull, or "gun metal" mirrors with lead sulphide, and golden mirrors with gold. These basic colors may be varied at will with colored glasses. By employing water-white plate glass and silver, an "orthochromatic" mirror, which reproduces color values accurately, is produced.



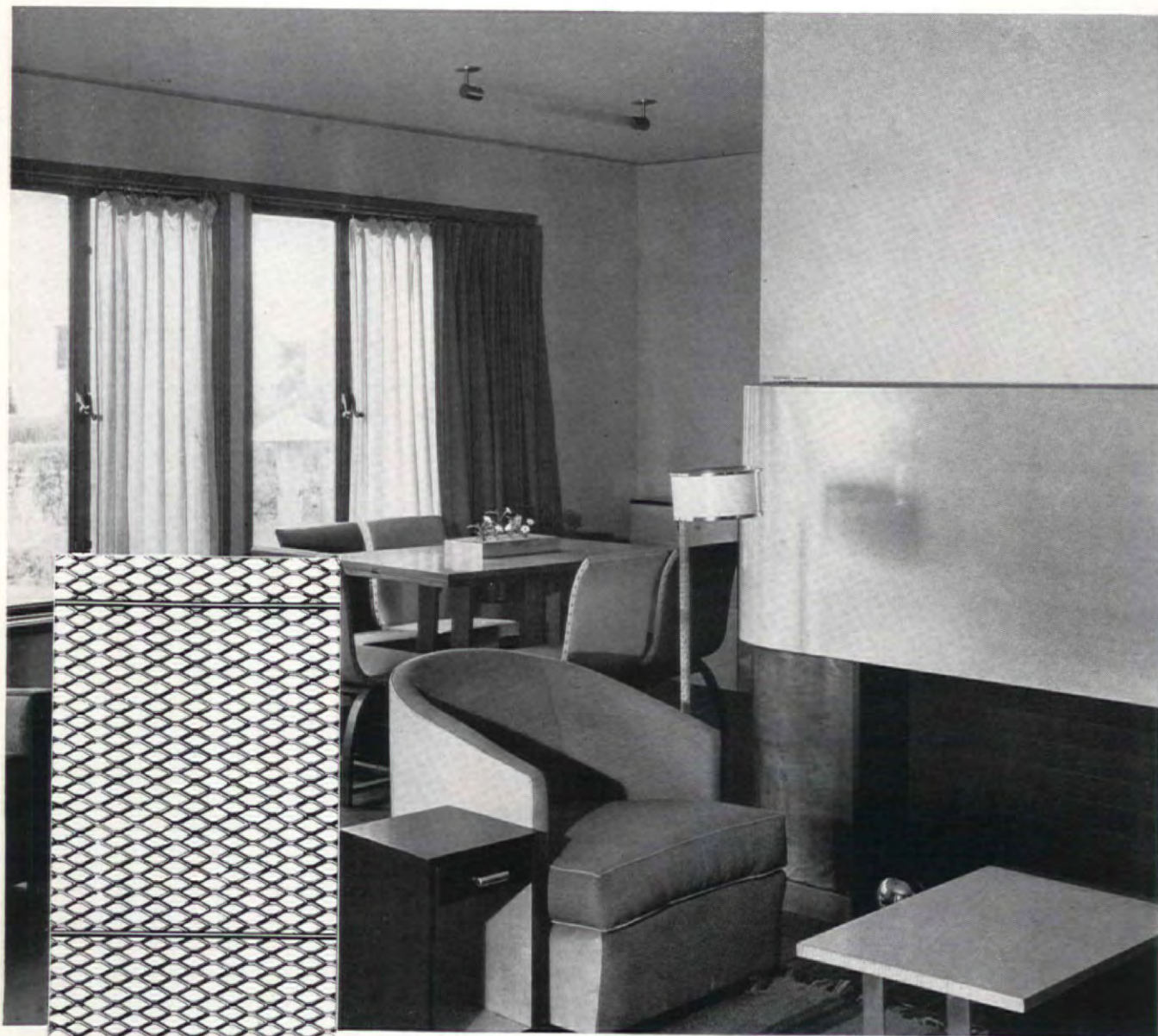
Glass blackboard, Blue Ridge Corp., Libbey-Owens-Ford, distributors

"ONE-WAY VISIBILITY" MIRRORS

For years a favorite subject of Sunday supplement feature writers, one-way glass, through which it is possible to see without being seen, has long been a minor mystery of the building business. Model and exhibition houses keep cropping up with mirrors of this type in their entrance doorways, but nobody seems to know just where to obtain them or why they are not more generally used.

The "one-way visibility" mirror is simply an ordinary mirror with the metallic coating very thin and not backed up. Such mirrors permit vision in one direction only in the sense that it is possible to see through them from a darker into a much brighter space without being seen: if the light is equally intense on both sides of the mirror this is not true. The same purpose may incidentally be accomplished with black cheese cloth.

(Continued on page 88)



FOR plastered surfaces with flawless beauty, Steelcrete Bar-X-Lath can be relied upon to provide the necessary reinforcement. This diamond mesh of expanded metal anchors the plaster to rigid steel—rigidity which is increased by twin welded bars which run the long way of the sheet, spaced on 7 inch centers. Bar-X-Lath is applicable to all types of plastered areas. It cuts and shapes readily for arches, curves and corners, and it combines with Steelcrete Studs or Channels for partitions or walls of any required thickness. Specify "Steelcrete Bar-X-Lath."



The
CONSOLIDATED *Expanded Metal*
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WHEELING, WEST VIRGINIA

Branch Offices and Warehouses: NEW YORK • CHICAGO • CINCINNATI • CLEVELAND
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Increase your profits with

J&L STEEL



Your plans can best be carried out with



J & L pipe is easily cut and threaded... the piping schedule can be kept on time... all the time.

... it keeps the piping job on schedule... piping goes in faster... and costly delays are avoided.

You can specify J & L pipe in your plans with full confidence that the piping job will go ahead... at full speed.

The mill threads on J & L pipe are perfectly cut, true and doubly inspected. Couplings are sound and accurately threaded. Cutting and threading operations are easily and quickly carried out on the job with J & L pipe.

Every length of J & L pipe is made in Jones & Laughlin mills. The steel is produced from ore and coal from J & L owned mines. We know what goes into our pipe. We control its manufacture com-

pletely. And we inspect it carefully during manufacture.

These are the reasons we say, "Your plans can best be carried out with J & L pipe"... for the piping job you will be proud of.

Other J & L Construction Products:

Bars, Shapes and Plates... Steel Piling... Structural Shapes... Nails... Tie Wire... Junior Beams... Lightweight Channels... Fabricated Structural Work.



To help you, we have prepared the J & L Tubular Products Data Book. This 134 page book gives detailed specifications and properties of J & L pipe, together with valuable application data for engineers and contractors. Write for your copy.

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MAKERS OF HIGH QUALITY IRON AND STEEL PRODUCTS SINCE 1850

THE THEME CENTER OF THE NEW YORK WORLD'S FAIR

started with a pencil



DARINGLY different — simple — beautiful, here is a symbol of New York's World's Fair . . . "The World of Tomorrow!"

By night the great Trylon will thrust itself 700 feet into the clouds; by day it will be a beacon marking the Fair's location. The Perisphere, broader than a city block, will be equal in height to an eighteen-story building. New amazing lighting effects will bathe the globe, while visitors gaze down on the colorful panorama of the Fair grounds.

* U. S. Pat. No. 1,738,888

AMERICAN PENCIL CO., Hoboken, N. J. °

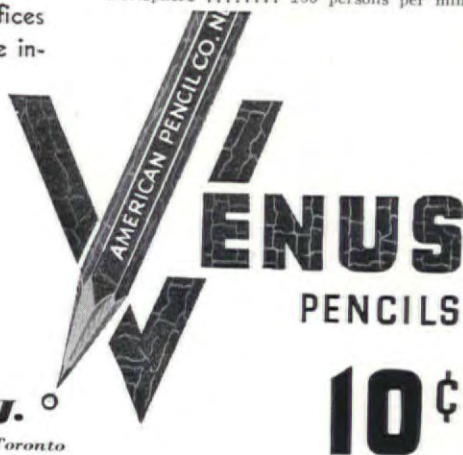
Also made in Canada by Venus Pencil Co., Ltd., Toronto

As in all modern architecture, from the rough preliminary sketches to the final specification drawings, pencils were the chief medium of expression. And today, in the leading architectural offices and drafting rooms, the pencils are invariably Venus Drawing Pencils.

No wonder! For Venus Drawing Pencils are made to exact standards. All 17 shades are accurately graded. Their colloidal* lead is stronger — smoother — free flowing.

SIGNIFICANT FACTS

Diameter of Perisphere	.....	200 feet
(Theme Exhibit Building)	.....	200 feet
Height of Trylon	.....	700 feet
(Beacon and Sound Tower)	.....	700 feet
Escalators to Perisphere	.....	65 feet
(Longest in the world)	.....	65 feet
Capacity of moving platform in	.....	160 persons per min.
Perisphere	.....	160 persons per min.





This house was chosen as the McCall Home of the Month for September, 1936.

ARCHITECT
ALBERT FREDERIC HEINO
SELECTS

JANITROL WINTER AIR CONDITIONER

as a leading attraction in \$16,500 house designed for SOUTH TOWN CONSTRUCTION COMPANY, CHICAGO*

● Acceptance is the prime consideration of the speculative-house builder. Mr Heino's selection of the Janitrol Winter Air Conditioner for this \$16,500 speculative house in the Beverly Hills residential district of Chicago is a convincing demonstration of the widespread acceptance of the Janitrol name.

Architects everywhere are recognizing that for clients building their own homes as well as for contractors building houses to sell, the heating equipment that proves most satisfactory from every viewpoint is Janitrol. Manufactured by a firm of highest reputation, concentrating for years exclusively on the manufacture of gas heat equipment, Janitrol — fully automatic — Winter Air Conditioners are relied upon to give long, trouble-free service, supplying clean, filtered, humidified air and circulating it mechanically at an even temperature throughout every room. See Sweet's Catalog for details of the complete Janitrol line. Surface Combustion Corporation, Toledo, Ohio.

* More than 12,000 homes in the Chicago area have installed Janitrol gas heating equipment. Janitrol is approved by the Peoples Gas, Light and Coke Company.

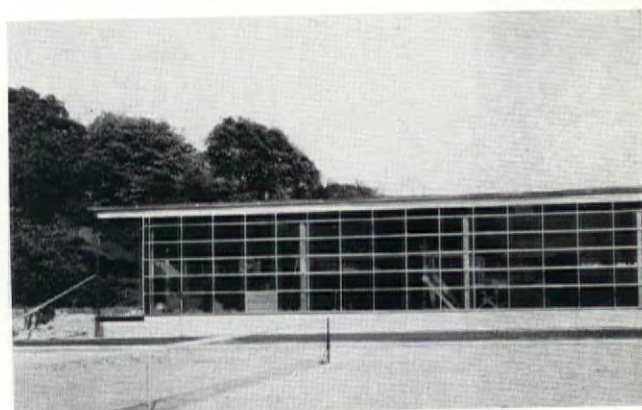
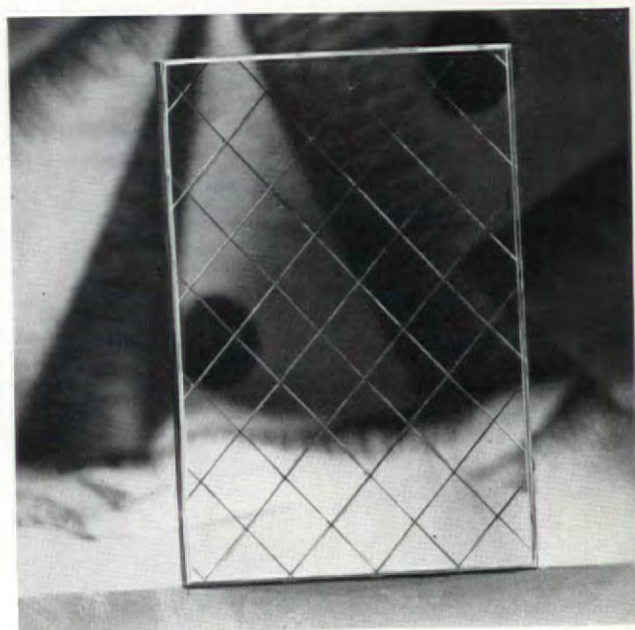
Janitrol ... A COMPLETE LINE
OF GAS HEATING and AIR-CONDITIONING EQUIPMENT FOR EVERY
RESIDENTIAL AND COMMERCIAL REQUIREMENT...made by the
SURFACE COMBUSTION CORPORATION



PRODUCTS and PRACTICE

(Continued from page 84)

Silver coated mirrors of this type are extremely unstable and soon discolor. A new process by which aluminum is electrostatically deposited on glass in a very thin layer makes possible a stable and permanent transparent mirror.*



Above, welded wire glass; below, factory glazed with "Coolite" heat-absorbing glass. Mississippi Glass Co.

INVISIBLE GLASS

A development in the method of using glass rather than in the glass itself, the invisible glass show window depends for effect on the fact that perception of a transparent substance is possible only if its surfaces reflect light. By so shaping glass surfaces that they reflect no light toward the observer the glass in windows of this type is rendered invisible. This is accomplished by means of specially curved plate glass sheets and jet black pockets called "baffles" at the top and bottom of the window, which, because of the shape of the sheets, are all the observer sees reflected in the surface of the window. Originally an English development, hundreds of such windows are now in use all over the United States.

* Mirrors of this type are made to order by Pancro, Inc., 1505 Gardena Ave., Glendale, Cal., and Semon-Bache & Co., 636 Greenwich St., New York, N. Y.

Take a Pointer on Paints from the Whole Paint Industry...

CONVINCED that Titanox pigments definitely improve the characteristics of paints—both interior and exterior—manufacturers everywhere now use these modern pigments in the formulation of their better coatings. Were you to ask why they have taken to these pigments in such a big way, they would give you these facts:

- Titanox pigments have the greatest opacity, whiteness and brightness of pigments produced commercially. They impart these characteristics to paint coatings.
- Titanox pigments are chemically stable and inert. Their whiteness is permanent, and they do not react with other paint constituents.
- Exterior paints formulated with Titanox pigments give unusual hiding even on difficult surfaces. They develop elastic films which, by meeting dimensional changes, tend to reduce checking and cracking and leave ideal surfaces for repainting. A Titanox-pigmented top coat over a Titanox-pigmented primer produces an outstanding 2-coat job.
- Interior paints formulated with Titanox pigments produce smoother, more brilliant finishes with no after-yellowing. In enamels they also develop a satisfactory gloss.
- Titanox pigments have no rival in the formulation of pastel shade paints to which they give clearness and sparkle with no muddy undertones.
- Finally Titanox-pigmented paints represent desirable economy to the user because, in addition to their exceptional hiding power, they are easy to apply.

Architects and maintenance men seeking high-quality painting at minimum cost will find that the paint industry has made possible this happy combination by providing Titanox-pigmented paints for every purpose.

TITANIUM PIGMENT CORPORATION

Sole Sales Agent

111 Broadway, New York, N. Y.; Carondelet Station, St. Louis, Mo.;
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2240 24th Street, San Francisco, Calif.



WHY not join the many architects everywhere who are specifying Titanox-pigmented paints for all classes of work? We invite you to make your own tests of these modern paints that you may prove their preeminence to your own satisfaction. Our paint technicians are ready to cooperate.

TITANOX

TRADE MARK

"THIS 'NEW AMERICAN' HOME WAS PLANNED AROUND THE KITCHEN"



SAYS PAUL B. SWEENEY

OF SWEENEY & BURDEN, ARCHITECTS, SYRACUSE, N. Y.

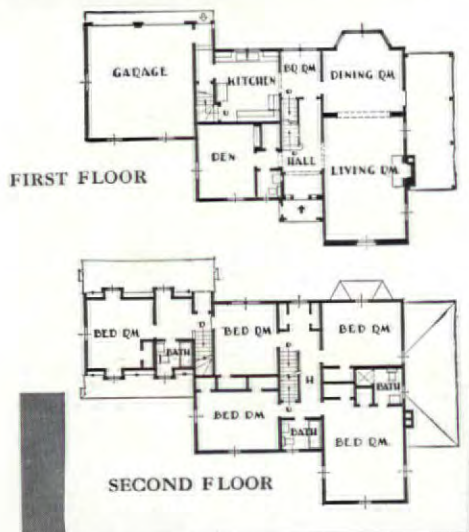
● "In planning this home for Dr. and Mrs. L. E. Sutton, our first consideration was ease of operation. So we decided to make it a 'New American' home.

"Mrs. Sutton was especially interested in three things—a well arranged, workable kitchen, a spacious living room, a recreation spot where the children could entertain without disturbing other members of the family.

"We accomplished all three. We installed a complete General Electric

kitchen; ran the living room the entire width of the house with dining facilities at one end; provided a large play-room in the basement and a carpentry-workshop as well. A modern G-E Home Wiring System guarantees electrical adequacy, and G-E automatic heating and winter air-conditioning assures uniform even temperature. In this 'New American' Home *everything* works—for the greater health and freedom of its occupants."

Paul B. Sweeney





Visitors to the Sutton home never fail to admire its smart and smoothly efficient kitchen. Completely equipped with a G-E refrigerator, range, dishwasher and sink with Disposall (waste unit).



In one corner of the carpentry-workroom in the Sutton basement, stands this gleaming G-E air-conditioning and heating unit. It has turned in a 100% performance since its installation.

The G-E kitchen—heart of the “New American” Home

No feature of the Sutton Home has received more enthusiastic praise for the architects than the smoothly efficient G-E all-electric kitchen. It simplifies work—saves wasted steps and energy—makes housework easier. A G-E kitchen is the heart of every “New American” Home. It includes such labor saving devices as a General Electric refrigerator, range, dishwasher and sink with a General Electric Disposall (waste unit). General Electric Kitchen units are flexible enough to fit every type of floor plan. They may be installed complete—or piece by piece.

First Aid to Busy Architects

The General Electric Home Bureau serves architects and their clients—with technical advice and assistance on all home-electrification and air conditioning problems. We will check your plans from an electrical point of view—prepare wiring and heating specifications—scientific lighting plans—kitchen schemes—and Home Wiring (Planned Wiring) layouts. We can supply you with valuable data on new electrical materials, methods, and equipment. Let us help you on your next job. Address: The General Electric Home Bureau, 570 Lexington Ave., New York.

The phantom drawing below shows the efficient G-E Home (Planned) Wiring system in the Sutton house—which assures full current, adequate outlets and the elimination of blown-out fuses.



The Sutton house is an excellent example of modern wiring and scientific heating. No dark spots—or dim corners. The lamps used are Mazdas made by G-E—the kind that stay brighter, longer.

Other General Electric Products for the Home

Dishwashers	Coffee Makers	Curling Irons
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Food Mixers	Urn Sets	Gas Furnaces
Hot Plates	Waffle Irons	Oil Furnaces
Ranges	Electric Blankets	Christmas tree lights
Refrigerators	Heating Pads	Floodlights
Ventilating Fans	Room Coolers	Photo Lamps
Clocks	Sunlamps	Mazda Lamps
Fans	Electric Irons	Vacuum Cleaners
Chafing Dishes	Ironers	Water Coolers
	Washers	

JUST PUBLISHED! A new book on Kitchen Planning... packed with new ideas for making kitchens lovelier and more efficient. Mail the coupon now for your free copy.

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Home Bureau, 570 Lexington Ave., N. Y.
Please send me your new book on Kitchen Planning.

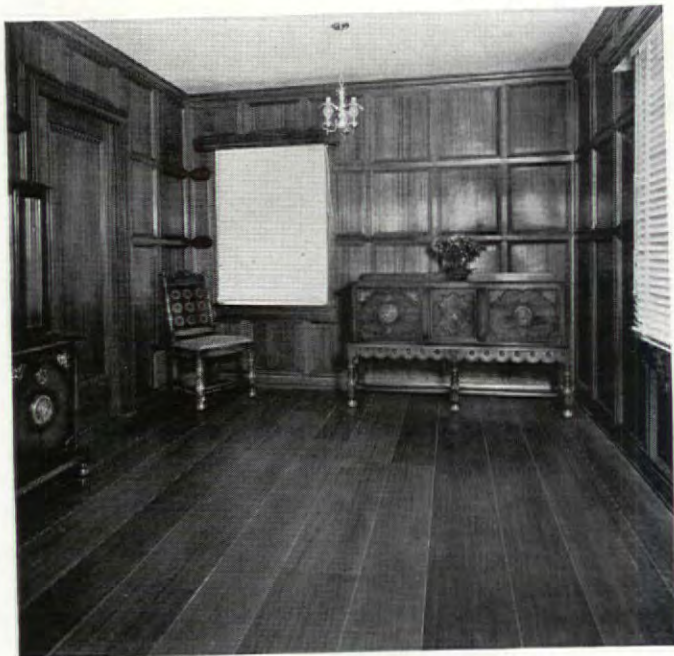
Name.....

Address.....

GENERAL ELECTRIC

RESEARCH KEEPS GENERAL ELECTRIC YEARS AHEAD!

ACHIEVE AN AIR OF LUXURY WITHIN THE *Average Budget*



Philippine Mahogany paneled walls and floors give an air of luxury at little added cost.

THE luxury of rich tropical hardwood interior finish now is available for the moderately priced building.

The low cost of Philippine Mahogany, the most economical of the luxurious tropical hardwoods, makes this possible. Used for trim in the average residence, Philippine Mahogany costs but \$75 to \$100 more than ordinary softwood. Philippine Mahogany increases the value of the residence by a much larger amount.

Lovers of beautiful woods everywhere choose Philippine Mahogany for its striking beauty of grain and figure, and for its distinctive warmth of color. It has an air of luxury for which the owner gladly would pay a premium if it were necessary for him to do so in order to obtain the rich effects which come with the well planned use of Philippine Mahogany.

In addition to interior trim, use Philippine Mahogany for fixtures such as doors, fireplace mantels, staircases, china closets. And it is unsurpassed for paneling.



FIXTURES

Philippine Mahogany, used here in a staircase, adds charm to the home interior. This wood may be employed either in its natural color or stained.

Unexcelled for Fine Furniture

Philippine Mahogany

MOST ECONOMICAL OF THE LUXURIOUS TROPICAL HARDWOODS

PHILIPPINE MAHOGANY MFRS. IMPORT ASSOCIATION, INC.
111 West Seventh Street, Los Angeles, California.

Please send descriptive literature.

Name _____

Address _____



B O O K S

(Continued from page 34)

PIONEERS OF THE MODERN MOVEMENT, FROM WILLIAM MORRIS TO WALTER GROPIUS, by Nikolaus Pevsner. Frederick A. Stokes Co. \$3.50.

History of the modern movement in terms of the activities of its chief exponents (Nov., p. 30).

THE EARLY ARCHITECTURE OF WESTERN PENNSYLVANIA, by the Pittsburgh Chapter of the A.I.A. William Helburn. \$15.

The prototype of the Historic American Buildings Survey. Illustrated with photographs and drawings (Mar., p. 26).

ART AND THE MACHINE, by Sheldon and Martha Cheney. Whittlesey House. \$3.75.

First American book to deal at length with industrial design and designers.

THE 1938 BOOK OF SMALL HOUSES, by the Editors of THE ARCHITECTURAL FORUM. Simon and Schuster. \$1.96.

101 house plans, photographs, and construction outlines, with chapters on various phases of house building.

DECORATIVE ART 1937, edited by C. G. Holme. Studio Publications, Inc. Paper, \$3.50, cloth, \$4.50.

The well-known English annual, showing modern interiors, furniture, and accessories (Apr., p. 136).

INDUSTRIAL ART IN ENGLAND, by Nikolaus Pevsner. The Macmillan Co. \$5.00.

Critical case-study of the state of industrial design in England (Nov., p. 30).

ART IN FEDERAL BUILDINGS, by Edward Bruce and Forbes Watson. Art in Federal Buildings, Inc. Washington, D. C. \$10.00. Mural paintings for the Treasury Department's buildings: reproductions of work done 1934-6 (May, p. 30).

WASMUTHS LEXICON DER BAUKUNST. Verlag Ernst Was-muth, Berlin. 624 pp., illustrated. 8 1/2 x 11 1/2. RM 33.75.

There has been no lack of evidence of the degrading effect of Nazi policy on German cultural life. If one requires additional clarification, this dictionary of architecture will furnish it. Well printed, compiled with scholarly care, it contains nothing on Erich Mendelsohn, Walter Gropius, Hannes Meyer, Miës van der Rohe, Breuer, Taut, or the Luckhardts—not a word on any of the men who made post-War German architecture the most highly esteemed in the world. The Bauhaus, a revolutionary venture in artistic education, gets a dozen lines stating that it turned out a few good wallpaper designs, but degenerated to aimless playing with materials. More space is given to Albert Speer, a young architect taken up by the Nazis, whose current masterpiece is the German pavilion in Paris. There is something nightmarish about this ruthless cutting out of mind and memory even the names of the best men a country has produced. For those who can read German, and who can stomach this approach to a non-political subject, the Was-muth dictionary is otherwise recommended.

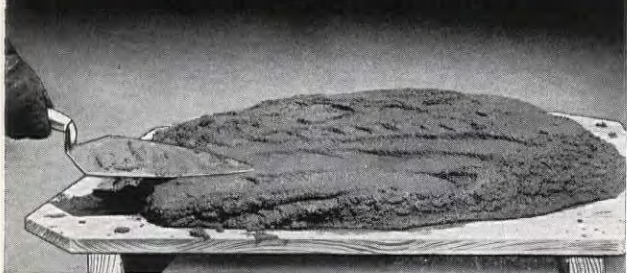
(Continued on page 96)

DRY MIX *made* **WORKABLE** WITH **TRUSCON MORTITE** **FOR A NON-SHRINKING MORTAR**

A stiff, harsh mortar—non-shrinking—
 but too dry to use.



Same dry mix, with MORTITE — still
 non-shrinking, but workable.



WATER, CAUSE OF SHRINKAGE

• These facts, simply stated, are the cause of mortar shrinkage:

- (1) Most of the water used in mixing any mortar is merely excess water added to provide workability. This water evaporates.
- (2) The evaporation of this water causes the mortar to shrink and open up cracks.
- (3) To correct such shrinkage and cracking less water should be used. But such dry mixed mortars are too stiff to be workable.
- (4) Mortite supplies the element of workability in mortar without excess water. By using Mortite the non-shrinking and non-cracking properties of a dry mixed mortar are retained.

Ask for Proofs

Write for literature on Truscon Mortite and proofs from independent testing laboratories covering compressive strength, shrinkage elimination, water-proofness and prevention of efflorescence. You actually get a better working brick mortar and speed up the job with Mortite.



1—ORDINARY MORTAR

This shrinkage is what happens with mortars which contain the excess water necessary to produce workability.



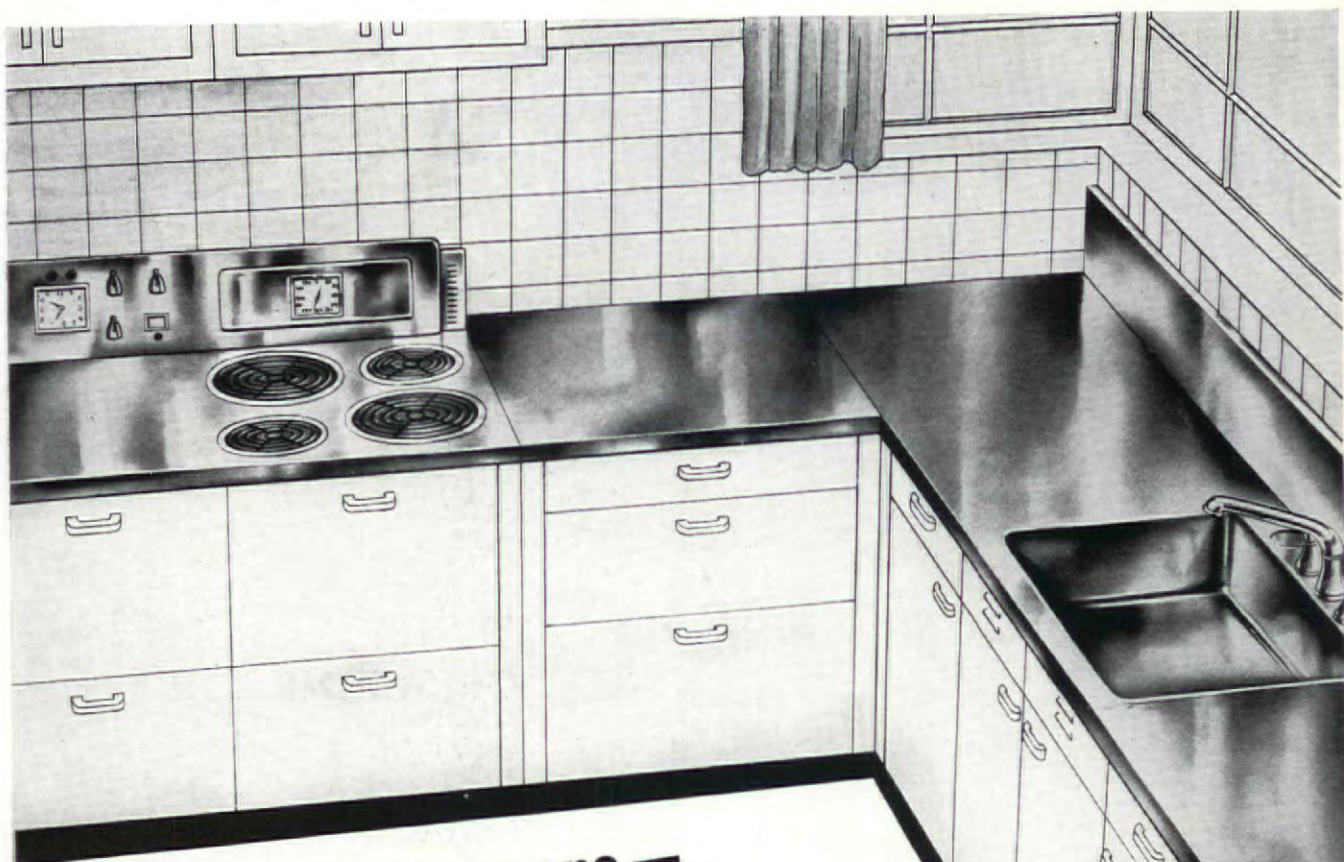
2—MORTITE MORTAR

This non-shrinking mortar is obtained by reducing the water content in mortar and adding Mortite.



TRADE MARK REGISTERED

THE TRUSCON LABORATORIES
 DETROIT • MICHIGAN



Matched Monel means — “MODERN KITCHEN”

Tops with the housewife of today are uniform work surfaces of lustrous long-life Monel.

NOT an artist's conception of the “Ideal Kitchen”—but a faithful reproduction of the kitchen in many a modern home is this drawing: For the uniform appearance of the kitchen is due to one thing—identical work surfaces made of the housewife's favorite metal, Monel.*

Why is this silvery kitchen metal so popular with the housewife of today? Because of smart appearance? That's one reason: But of still greater importance—it offers the many *additional* advantages the modern housewife expects: One, its soft, silvery lustre improves with every day use. Two, Monel never gets rusty, even at corners or welds, because it is solid, rust-proof metal clear through with no coating to chip, crack or peel. Three, Monel is literally harder, tougher, stronger

than structural steel, yet resilient—easy on dishes. And four, this tough, hard metal is *also* highly resistant to corrosion—will endure for years to come.

Can you specify Monel for all kitchen work surfaces? Certainly! Monel sinks and Monel-topped cabinets can be delivered promptly to any part of the country—while all leading makes of both electric and gas ranges are available with Monel work surfaces. Furthermore, these units not only match in appearance, but can be furnished to match in construction, too—to fit together perfectly.

In planning kitchens, remember Monel means perfectly uniform, lastingly beautiful work surfaces. We'll be glad to send you full particulars on Monel kitchen equipment. Write also, if you wish, for technical information about the metal itself. Address:

THE INTERNATIONAL NICKEL
COMPANY, INC.
67 Wall Street New York, N. Y.



*Monel is a registered trade-mark applied to an alloy containing approximately two-thirds Nickel and one-third copper. This alloy is mined, smelted, refined, rolled and marketed solely by International Nickel.



Insulux ADDS THE *Plus*

OF LIGHT TRANSMISSION TO INTERIOR PARTITIONS



• A recent installation of INSULUX Glass Block in the ultra-modern American Education Press Building, Columbus, Ohio. Richards, McCarty & Bulford, Architects.



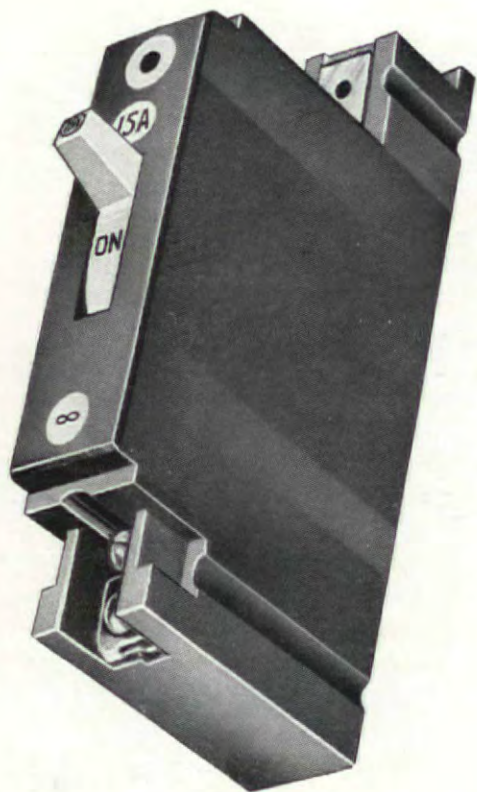
• Interior of new offices of the First Wisconsin National Bank in Milwaukee. Here is a typical installation where INSULUX retains privacy while transmitting light—the modern way. Edwin J. Kraus, Architect.



• A doctor's office in Clayton, Missouri. Harris Armstrong, Architect. Another excellent example of the adaptability of INSULUX to use in interior partitions.

• INSULUX does all of the things expected of an ordinary office partition—and more! It adds privacy and reduces sound transmission to a minimum. In addition to all its other advantages, INSULUX Glass Block offers the definite plus of Light Transmission—a plus that many building owners and architects find is translated into lower lighting costs and improved working quarters. Some types of offices, especially those built in connection with factories and industrial buildings, have a special need for INSULUX Glass Block. In these installations, INSULUX reduces factory noises and gives privacy, yet admits almost all of the available light. Complete data is available on request. Write to Owens-Illinois Glass Company, Industrial and Structural Products Division, Toledo, Ohio.

OWENS-ILLINOIS *Insulux*
GLASS  BLOCK



The New "DUBLBRAK"

CIRCUIT BREAKER

*Insures Double Value
Performance*

It protects lighting and appliance branch circuits against sustained overloads or short circuits when protection is needed.

YET because of the properly engineered time lag feature of the thermal element unnecessary and annoying interruptions of service are avoided.

Approved by Underwriters' Laboratories for both AC and DC service 125 volt 6 to 50 ampere. . . . Available January 1, 1938.

Frank Adam
ELECTRIC COMPANY
ST. LOUIS

B O O K S

(Continued from page 92)

DER STUHL, by Adolf G. Schneck. Julius Hoffmann, Stuttgart. 64 pp., 134 illustrations. 9 x 11½. RM. 7.

This book on chairs, third in a series which has already dealt with furniture construction, wardrobes, tables, and beds, continues the painstaking work characteristic of Mr. Schneck's earlier publications. Concerned chiefly with wood chairs, the author shows photographs of selected models, supplemented with plans and elevations, and occasionally with construction



details. Upholstered examples are omitted, being treated in another volume. Work illustrated ranges from very good to very bad, with a preponderance of the former. A useful compendium for those interested in furniture design.

TECHNOLOGICAL TRENDS AND NATIONAL POLICY. Report of the Subcommittee on Technology to the National Resources Committee. U.S. Government Printing Office. 384 pp., 11¼ x 9. \$1.00, paper.

In this age of rapid technological advance, invention is proceeding at an accelerating rate. No planning for the best use of our national resources will be worthy of the name which neglects the effect of new inventions on our living and working conditions. This document, in a series of related papers prepared by authorities in their respective fields, points out the social aspects of technology—the impact of new inventions on our social and economic life—and outlines the technological developments in the major fields of American industry.

It picks up where "Recent Social Trends" left off. Its pages depict the apparently inevitable and slow but irresistible progress of technology in overcoming the resistance of man to changes which affect his way of living and his means of livelihood. Vital and interesting history is crowded into the first four chapters on the Social Aspects of Technology, 66 pages of worthwhile reading in spite of their forbidding titles.

The chapter on the construction industries sketches the growth of community planning, improvements in equipment, new methods and materials of construction, the trend toward prefabrication, and touches on the trailer and its possible influence. Improvements in foundation and heavy construction work are included.



HERSHEY CHOCOLATE COMPANY, HERSHEY, PA.

Bigelow Carpets add beauty and quiet in Hershey's windowless office building

One of the country's most interesting office buildings is the windowless structure designed and constructed for the Hershey Chocolate Company by Hershey Lumber Products — D. Paul Witmer, Manager. In layout and construction, everything possible was done to promote efficient working conditions and employee comfort.

Scientific indirect lighting, air-conditioning and sound-proofing are found throughout. For all private offices, Mr. Witmer selected Bigelow carpet — laid over a padded surface — because it combines great sound absorbent qualities with lasting beauty.

Unusual in most respects, this truly modern building is like thousands of others in its use of Bigelow carpet. Whatever your next carpeting problem may be, won't you call us in as Carpet Counsel to help you solve it expertly?

Contract Department, Bigelow-Sanford Carpet Co., Inc., 140 Madison Ave., New York.



DIRECTORS' ROOM



OFFICE OF CHIEF ACCOUNTANT



PRESIDENT'S OFFICE

CARPET COUNSEL by BIGELOW

Avoid "damp plaster" trouble by using-



LUMINALL

Luminall is a superior paste casein paint. Many leading decorators prefer it for its greater beauty and clarity of color. It also has the advantage of going on new plaster without damage to either the paint or wall.

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Send for 24 page fully illustrated booklet on Luminall



OK^{By} 548 ARCHITECTS

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If you haven't already written for your Ferro Data File, drop a card in the mail today. You'll find it a complete and compact summary of all the details of porcelain enamel construction. It's AIA File No. 15-H-2.

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Effective Use of Flat Sheet Materials

FOR ALL BUILDING NEEDS

is facilitated by the Revere Revecon System of extruded aluminum alloy structural sections. Permits component panels to expand and contract individually without distortion, while preserving the integral unity of the whole. See your "Time-Saver" Desk Manual, or write our Executive Offices on your own letterhead for the Revere Revecon Hand Book.

Revere furnishes a comprehensive service in copper or copper alloy products to architects and all branches of the building trades. Near-by distributors assure prompt deliveries.



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 Revere Thru-Wall
 Flashing • Sheet
 Copper, Plain or
 Lead-Coated
 Copper Water Tube
 Brass Pipe
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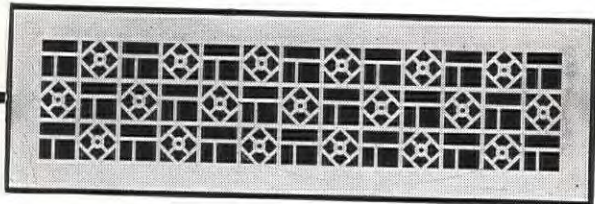
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LETTERS

(Continued from page 40)

Before the Depression it was impossible to take up any architectural magazines without finding in them articles proving that more and more buildings were being brought into the world without an architect to assist at the accouchement. Things were coming to a pretty pass, to coin a phrase. When a man or woman wanted a house built, what did he or she do? He or she—or it—went out in front and whistled and up galloped either a contractor or a lumber company and threw free plans all over the whistler like confetti.

This procedure contained an element of danger. No one who was hit on the head with a picture in seven colors of a Cape Cod cottage with French dressing and eleven gables, no two alike, was ever quite the same afterwards.

At any rate, the architect was doomed to extinction, it seemed. I thought it all over and decided that the only thing we architects could do was to picket all buildings not designed by architects, marching up and down in front of them carrying empty tee-squares. Then I got to thinking, "What is an empty tee-square?" and after worrying over this problem for some days everything went black in front of me.

I awoke, Mr. FORUM, to a new world.

And a far, far better world. What had happened while I lay comatose?

THE ARCHITECT HAD BEEN JUSTIFIED IN THE EYES OF MEN. Houses and all other types of buildings designed by competent architects had weathered the depression in far better shape and with less depreciation than the ones thrown together without benefit of clergy. So what happened then?

Intelligent bankers, building and loan officials and the better class of contractors saw the Light. They started employing architects for their building operations. Governmental agencies put in some good licks boosting the architect-designed building.

You know what I think?

I think that another Era of Good Feeling is upon us. The old 3C motto—Canine Consume Canine—has gone into the discard. I believe that the time has now arrived when everyone will be willing to "shinny on his own side," as we used to remark at the Madison school playground.

Two contractors who used to deface the subdivisions of Grand Rapids with the most God-awful houses that ever gave you painter's colic have taken to building houses that one of my colleagues designed. Naturally he didn't do it as well as I would have done it, but we can't have everything. At least he did it better than the contractors would have done it in the bad old days when they would simply have

the painter rear back and Give It All.

The new viewpoint permeates the whole industry. Some of the credit is undoubtedly due to the fact that more laymen are reading architectural journals. As long as the circulation of these journals was confined to architects, the best examples of current architecture were not readily available to bankers, building and loan officials, and contractors. We were merely talking to ourselves. But with THE FORUM going to an audience that includes thousands who control building money, the picture is changed. No one who has been exposed to seeing just how much the building dollar can buy, will ever embark on a building program without architectural advice.

More power to you; more power to all of us. I think the dam has busted, and a flood of construction is about to engulf us. Blow up your water wings.

ROGER ALLEN

Grand Rapids, Mich.

Errata

THE ARCHITECTURAL FORUM wishes to acknowledge: Credit to American Tile & Rubber Co. for rubber flooring for the main dining room at Ben Marden's Riviera (ARCH. FORUM Nov., '37, p. 379); for the rubber flooring for the International Casino (ARCH. FORUM Nov., '37, p. 385).

The photograph (lower right, p. 319, Oct., '37 ARCH. FORUM) should have been credited to MODERNAGE.

The photographs, p. 255, 309, 354 (bottom) Oct., '37, ARCH. FORUM, should have been credited to Architect Serge Chermayeff—Ed.

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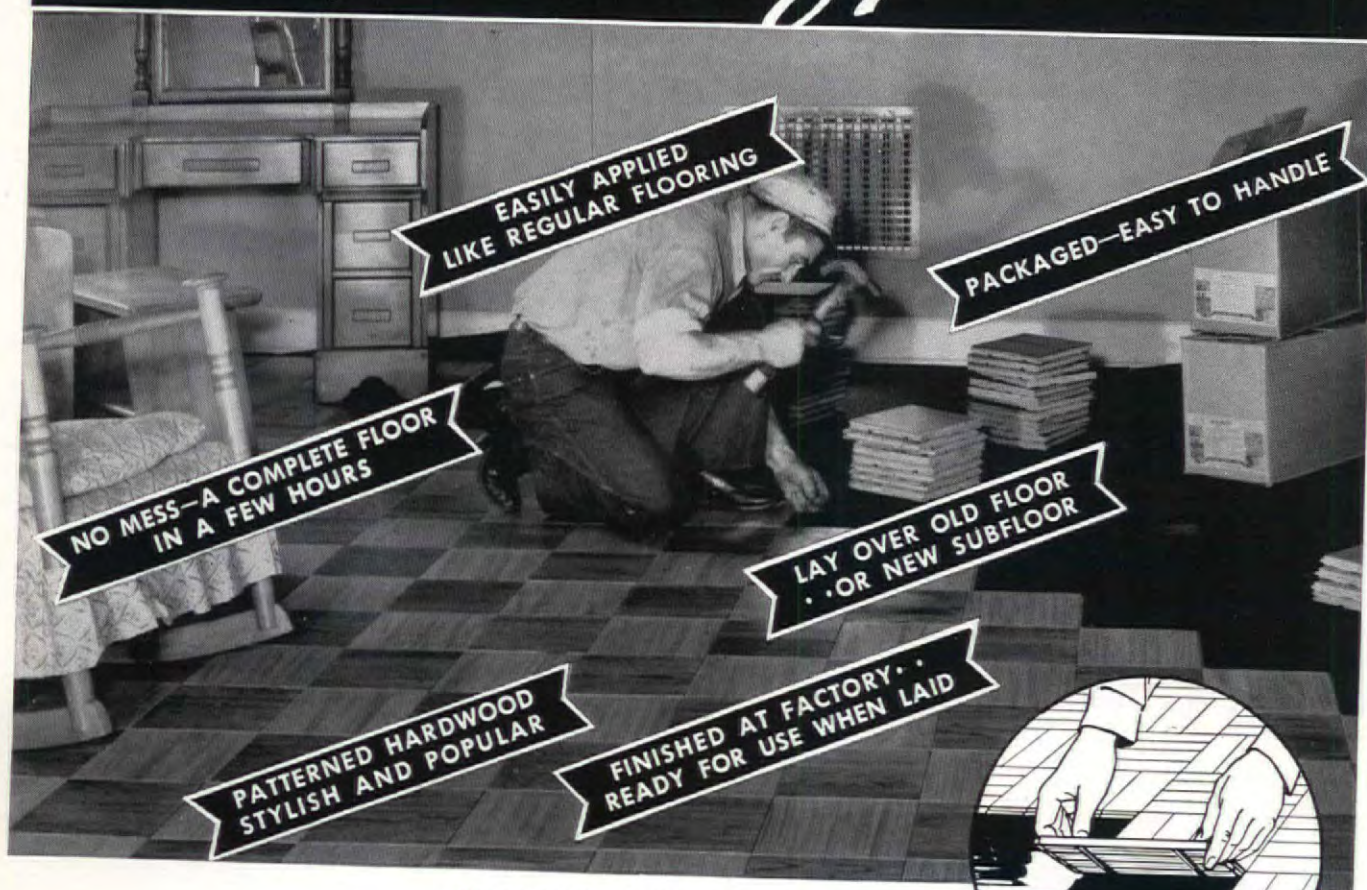
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SPECIFICATION AND BUYING INDEX

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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nation of murals and Black Birdseye Cypress Flexwood as a wall treatment is both distinctive and pleasing. This exceptional veneer has been used only twice before: in the offices of Schenley Distillers Corp., and in the Santa Fe's Super Chief.

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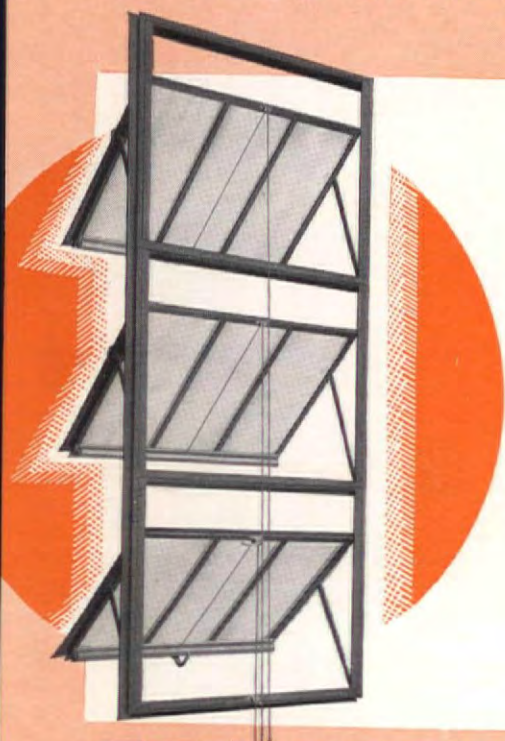
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THE ARCHITECTURAL FORUM HAS THE
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DEVOTED TO THE NEW WORK OF

FRANK LLOYD WRIGHT

A transitional period, whether it refers to biology, technics, or economics, is characteristically one in which survivals of the past mingle with indications of the future. No better description could be applied to the architecture of 1937 and the dozen years before it.

If architecture implies logical building rationally expressed, nothing could be more astonishing than the potpourri of styles which appears on the street, in the drafting room, in the pages of magazines and newspapers. Where is the set of basic criteria which can properly evaluate the modern house in relation to its neo-Colonial neighbor? Or the period school and its modern twin? Unless both are right, which seems unlikely since they represent diametrically opposed points of view, the only answer will be found in the fact that architecture is a reflection of its time. And the one

outstanding characteristic of this time is change, and its concomitant, uncertainty.

It is a political platitude that a vanguard which gets too far ahead of the main body of public opinion is no longer a vanguard, but an isolated, ineffectual movement. In architecture the statement is no less valid: the men who advocated large-scale housing many years ago waited until the last year or two for the first signs of a realization of their hopes; the same time lag existed between the teachings of Sullivan, Wright, Loos, Mackintosh, and others, and the beginning of their acceptance.

If 1937 has any significance as a milestone in the development of a universally accepted modern style, it is that during this year the proportionate amount of modern work has increased enormously. Some of the buildings in this portfolio indicate to what extent the modern approach has penetrated public consciousness and influenced the architect's technique. Perhaps these are but isolated examples—or does their number indicate the crystallization of a trend?

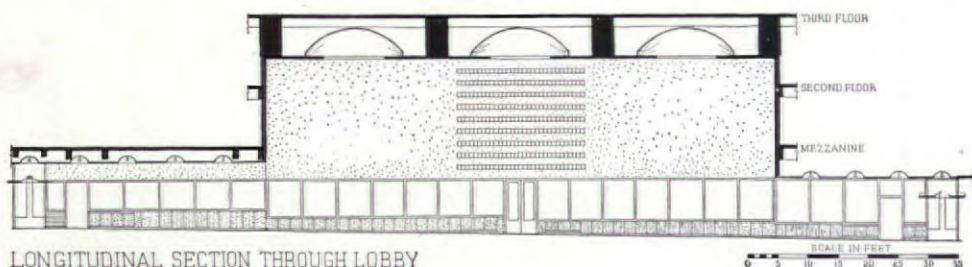
But it is a long way from a trend to a fully developed style. Today we have traditional houses with modern plans, and "modern" houses with traditional plans. What we know as modern is a synthesis of the two, the expression of a movement that found its beginnings in the acceptance of the machine. In some cases, where circumstances dictated a high degree of mechanical production, as in factories, office buildings, and prefabricated gas stations, architecture has already arrived at a standard of expression. In other fields, even where tradition is strong, even where handicraft persists, no realist can deny the demand for a solution in terms of today.

COMMERCIAL

Robert M. Damora Photos



OFFICE BUILDING ROCKEFELLER CENTER, NEW YORK CITY



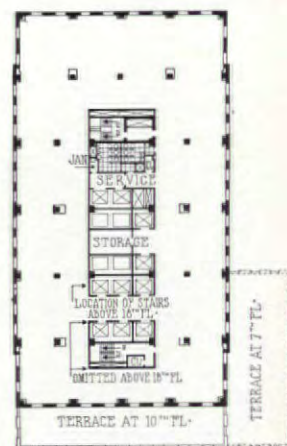
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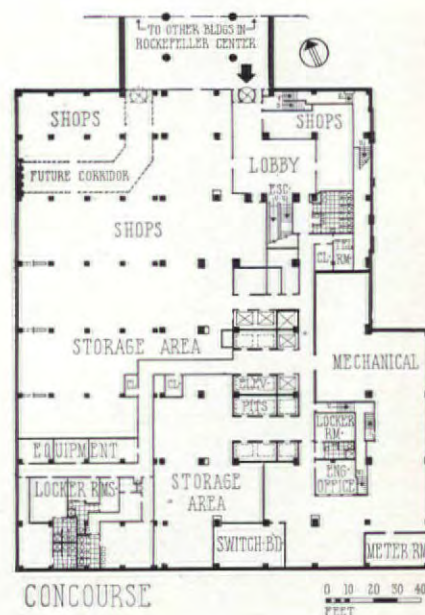
1. 70 STORY R.C.A. BUILDING
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6. 41 STORY INTERNATIONAL BUILDING
7. PROPOSED LOW BUILDING
8. THE CENTER THEATER
- 8A. PROPOSED BUILDING
9. 16 STORY OFFICE BUILDING
10. RADIO CITY MUSIC HALL
- 10A. 31 STORY R.K.O. BUILDING
11. PROPOSED LOW BUILDING

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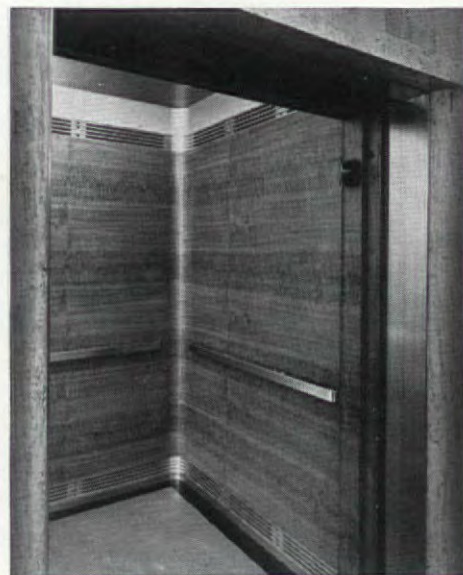
TYPICAL OF 2ND TO 32ND FL







ELEVATOR HALL



CAB DETAIL

CONSTRUCTION OUTLINE

FOUNDATION

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STRUCTURE

Walls—4 in. limestone, Indiana Limestone Co., 8 in. brick, metal lath furring by Simpson Products Corp. Spandrels—aluminum, Aluminum Co. of America. Interior partitions—tile, New Jersey Hollow Tile Co., bricks and gypsum blocks, U. S. Gypsum Co. Columns—structural steel, Carnegie Steel Co.; fabrication, American Bridge Co. Floor construction—girder and beam reinforced wire cloth slab, Concrete Architectural Construction Co., Inc. Steel protective paint, Goroseo Products Co.

ROOF

Reinforced concrete slabs, Concrete Architectural Construction Co., Inc. Tile—Ludowici-Celadon Co. Waterproofing—paper and pitch, Barrett Co.

SHEET METAL

Flashing—Anaconda copper, American Brass Co. Ducts—sheet metal, Republic Steel Corp. Tanks—Carnegie Steel Co.

INSULATION

Walls—Cabot's Quilt, Samuel Cabot, Inc. Roof—cork insulation, Armstrong Cork Products Co. and Celotex, Celotex Corp.

WINDOWS

Show windows—General Bronze Corp., 3/4 in.

plate glass, Pittsburgh Plate Glass Co. Office windows—steel, double hung, Campbell Metal Window Corp.; 1/2 in. standard plate glass in upper sash, 3/4 in. clear plate for lower, Pittsburgh Plate Glass Co.

STAIRS AND ELEVATORS

Stairs—steel, cement filler, Samuel Fassler Iron Works. Elevators and Escalators—Westinghouse Electric Elevator Co.

FLOOR COVERINGS

Store floors—terrazzo finish, V. Foscato, Inc. Building lobby—Travertine, Pisani Marble Importing Co. Corridors—asphalt tile, David E. Kennedy. Elevator lobbies—terrazzo, V. Foscato, Inc., vitrified tile, Cambridge-Wheatly Tile Co.

WALL COVERINGS

Lobby—Travertine, Pisani Marble Importing Co. Elevator lobbies—marble, Jerome K. Jackson. Toilet rooms—tile, Franklin Tile Corp.

WOODWORK

Doors and frames—Dahlstrom Metallic Door Co. Shutters—rolling steel, Kinnear Mfg. Co.

HARDWARE

Interior and exterior—natural bronze, P. & F. Corbin.

PAINTING

Interior: Walls—primer, Benjamin Moore & Co. Ceilings and walls—Sani-Flat lithophone paint, Benjamin Moore & Co. Floors—cement floor enamel, Debevoise Co., oil base preservative paint, Benjamin Moore & Co. Metal trim—Pittsburgh Plate Glass Co. Brick and

cement coating—Devoe & Reynolds Co.

ELECTRICAL INSTALLATION

Switches—Bryant Electric Co. Fixtures for show windows—Frink Corp. and Holophane Co.; for office lighting—Geo. Ainsworth. Fire alarm system—Stanley Patterson. Watchman's system—Auto-Call. Conduit—Walker Bros.

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All fixtures by Crane Co. Pipes: Soil—extra heavy cast iron, Central Foundry Co. Waste and vents—steel, Youngstown Sheet & Tube Co. Water supply—brass, American Brass Co.; fittings—brass, Walworth Co.

HEATING AND AIR CONDITIONING

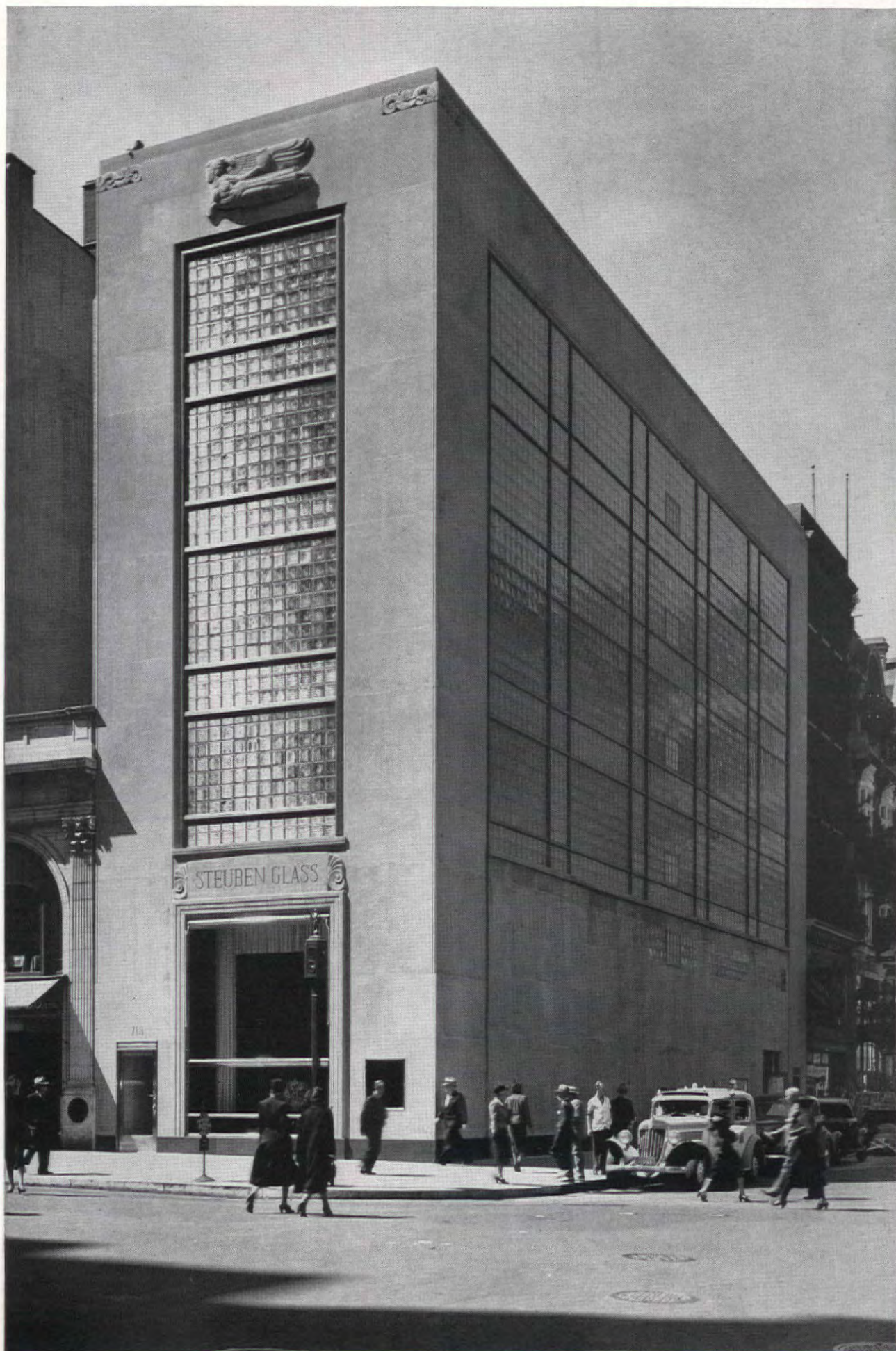
Two pipe system with high vacuum. Fans and air washers—B. F. Sturtevant Co. Pumps—circulating, Lecourteney Co. Radiators—Corto, American Radiator Co. Valves—Crane Co.; pressure reducing valves—Spence Engineering Co., Inc. Differential system of control, C. A. Dunham Co. Hot water heaters—Patterson-Kelly.

SPECIAL EQUIPMENT

House and fire pumps—Lecourteney Co. Fire equipment—U.S. Rubber Co. Liquid level indicators—Brown Instrument Co. Air compressors—American Air Compressor Corp. Water temperature regulators—Curtis-DeEsté Mail chutes—Cutler Mail Chute Co. Mail boxes—General Bronze Corp. Venetian blinds—Mackin Venetian Blind Co. Directory boards—General Bronze Co. and Ticket & Tablet Co.

BUILDING FOR CORNING GLASS WORKS, NEW YORK CITY

WILLIAM & GEOFFREY PLATT, ARCHITECTS; JOHN M. GATES, ASSOCIATED



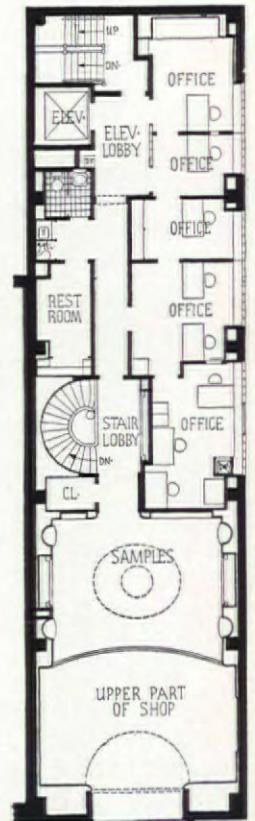
Samuel H. Gottscho Photos



DISPLAY ROOM A

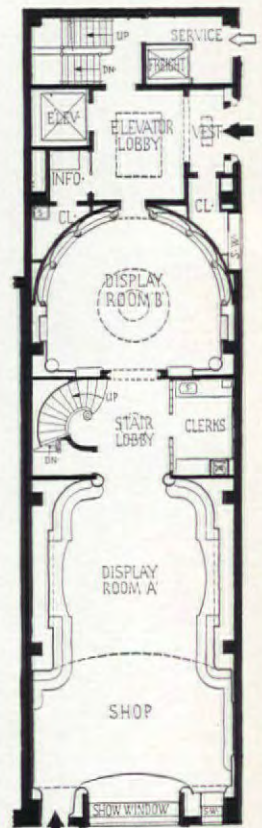
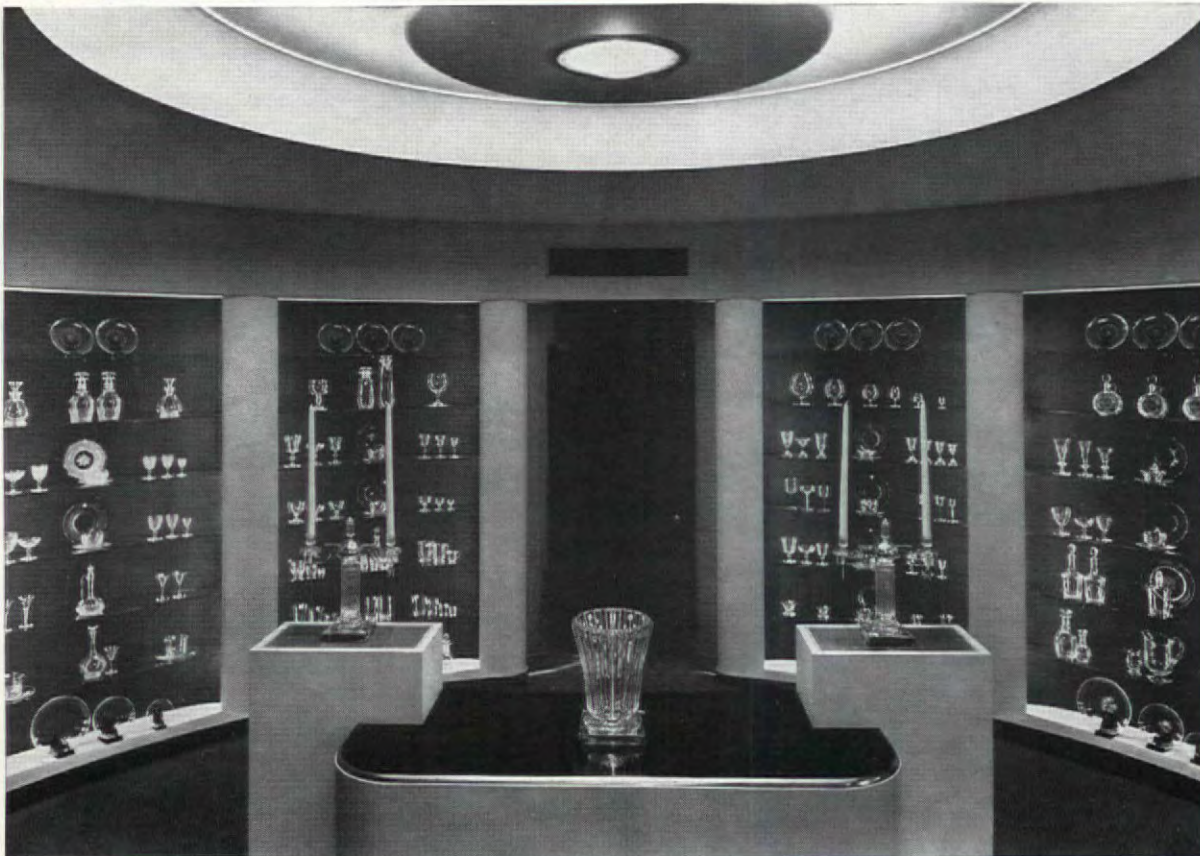


TYPICAL FLOOR



MEZZANINE
0 5 10 15 FEET

DISPLAY ROOM B



FIRST FLOOR

In the course of designing Steuben show rooms* for New York, Chicago, and Palm Beach, the architects have developed a remarkably effective technique of merchandise display whose chief characteristics are absence of color, studied grouping of exhibits, and special high-intensity lighting superbly designed to show the glass. In this new office and show room building, this approach reaches a new high. In the structure and decoration of the building the company's own products were utilized to the fullest extent. Of the walls which enclose the offices, 80 per cent of the area is glass block; the same material is also used for some of the interior partitions; fibrous glass is used for both heat and acoustical insulation; decorative applications include silvered glass tiles, grilles, balusters, moldings, and gun metal mirrors. Invisible glass is used for the two show windows. Display space consists of a main room, part of which is two stories high, and a semicircular room in the back. On the mezzanine samples are shown, with occasional exhibits. A striking feature of the display area is the use of pressed shells on the walls of the stair lobby, a material entirely suitable for such an interior. The offices are simple in design, a few having flush wood paneling and and specially designed furniture; due to the nature of the building air conditioning was mandatory throughout.

*See ARCH. FORUM, March 1934, June 1937.

VIEW THROUGH SHOW WINDOW





STAIR TO MEZZANINE

SIDE ENTRANCE LOBBY



CORNING GLASS BUILDING

WILLIAM & GEOFFREY PLATT, ARCHITECTS;
JOHN M. GATES, ASSOCIATED

CONSTRUCTION OUTLINE

FOUNDATION

Footings—stone concrete. Walls—common brick. Waterproofing: Spandrels—Uco fabric. Vault walls—waterproof cement; felt and pitch for sidewalks.

STRUCTURE

Walls—common brick faced with Bedford Indiana limestone on street front; main portion of walls Corning Glass brick, Corning Glass Works. Interior partitions—terracotta blocks and U. S. Gypsum Co.'s blocks. Columns and structural steel—American Bridge Co. Floor construction—Republic system of two way steel bar reinforced stone concrete ribs with slag fillers, ceilings plastered.

ROOF

Same as floor construction, covered with plastic slate roofing finished with one layer of Ruberoid roofing, Ruberoid Co.

SHEET METAL

Flashing and gutters—copper.

INSULATION

Roofs— $\frac{1}{2}$ in. Celotex, Celotex Corp. Sound insulation—Acoustone used in all display spaces and most offices, U. S. Gypsum Co.

SHOW WINDOWS

Invisible type, Lamson Co.

STAIRS AND ELEVATORS

Stairs—steel throughout with slate treads. Elevators—Haughton Elevator Co.

FLOOR COVERINGS

Display spaces—rubber tile; offices—linoleum, Armstrong Cork Products Co.

WALL COVERINGS

Plaster covered throughout by glass cloth and paper, Richard E. Thibaut, Inc. Stair halls—Kapa shell treatment. Toilet rooms—wainscoted with Carrara glass, Pittsburgh Plate Glass Co. Side entrance lobby—marble wainscoting with Corning aluminum flashed glass tile above, Corning Glass Works.

WOODWORK

Trim—molded steel. Interior doors—flush, veneered wood. Exterior doors—American Brass Co. nickel silver glazed with Pittsburgh Plate Glass Co. plate glass.

HARDWARE

Interior—chrome finish. Exterior—nickel silver. All by Yale & Towne Mfg. Co.

PAINTING

All material by Pittsburgh Paint Co.

ELECTRICAL INSTALLATION

Wiring system—rigid conduit. Switches—Bryant Electric Co. Fixtures—Magnalux, Westinghouse Electric & Mfg. Co., and Kliegl, Kliegl Bros. Show window lighting—Century Lighting Co. and Sunlight concealed lighting for all display spaces.

PLUMBING

Fixtures—vitreous china, Standard Sanitary Mfg. Co. Drinking fountains—Westinghouse Electric & Mfg. Co. Pipes: Soil—cast iron. Water—brass piping throughout covered with Corning glass wool insulation, Corning Glass Works.

HEATING AND AIR CONDITIONING

Two-pipe vacuum steam heating system; steam supplied by N. Y. Steam Co. Air mixing system and tempering coils—American Blower Co. Refrigerating system and local room air mixing unit—Carrier Corp. Filters—glass, Libbey-Owens-Ford Glass Co.; glass wool insulation for covering all equipment, duct work steam and chilled water piping throughout. Uniflo air conditioning grilles, Barber-Colman Co. Radiators—Carrier Corp. air fin coils for local room mixers; Arco cast iron convactor type for all other concealed radiation, American Radiator Co. Valves—Warren Webster Co. Regulators—Powers Regulator Co. Individual units in each office permits tempering air summer or winter to suit individual requirements. Separate smoke exhaust system provided for all conference rooms. The entire air conditioning plant is installed in a penthouse on the roof of the building.

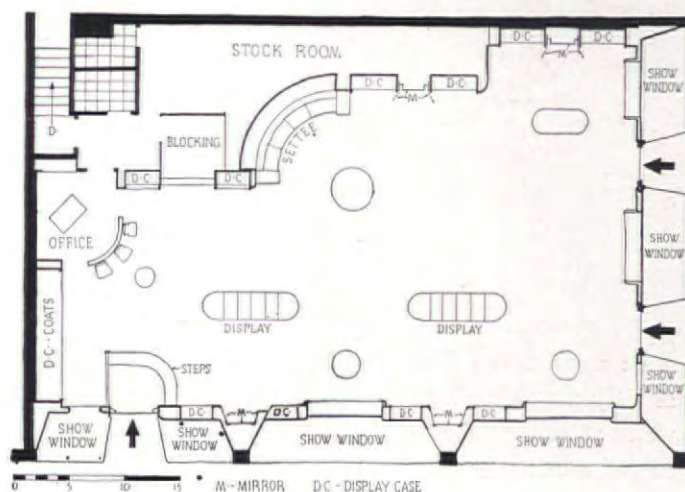
STORE FOR DUNLAP HATS, NEW YORK CITY



Ed Herbert, Inc.

EDWIN H. CORDES, ARCHITECT
FOR S. S. SILVER & CO. INC.

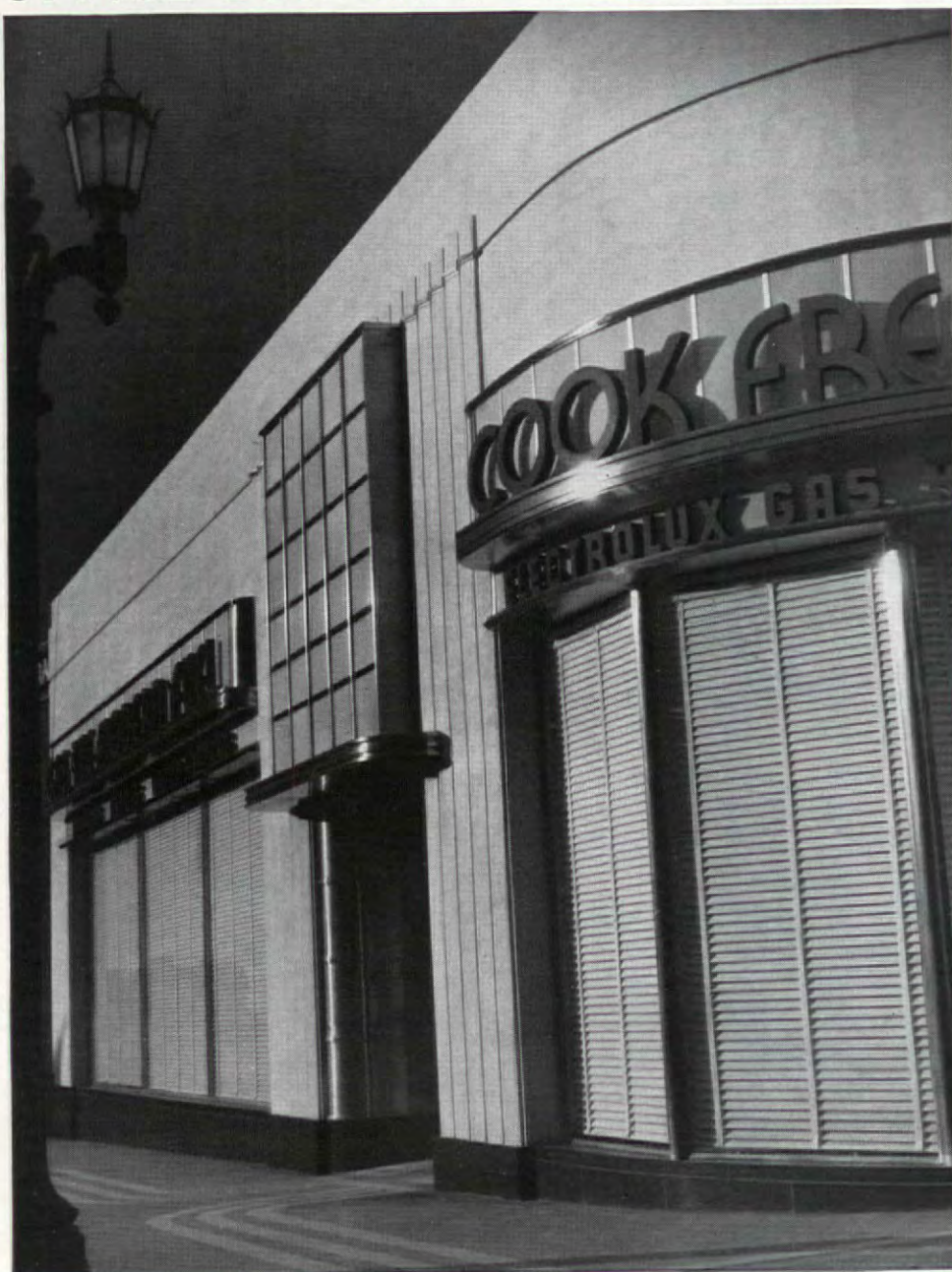
This store serves both the function of a high grade retail establishment and also as a prestige background for the sale of Dunlap hats throughout the U. S. The architect, therefore, provided unusual spaciousness and an uncommon degree of luxury. Special pieces were designed for the various kinds of merchandise, the larger part of the stock being displayed on open shelves. A simple, but richly textured background is provided by the wall paneling and carpeting. Most refreshing is the complete absence of the usual stylistic cliches, whether "modernistic" or otherwise.



FINISHES AND EQUIPMENT

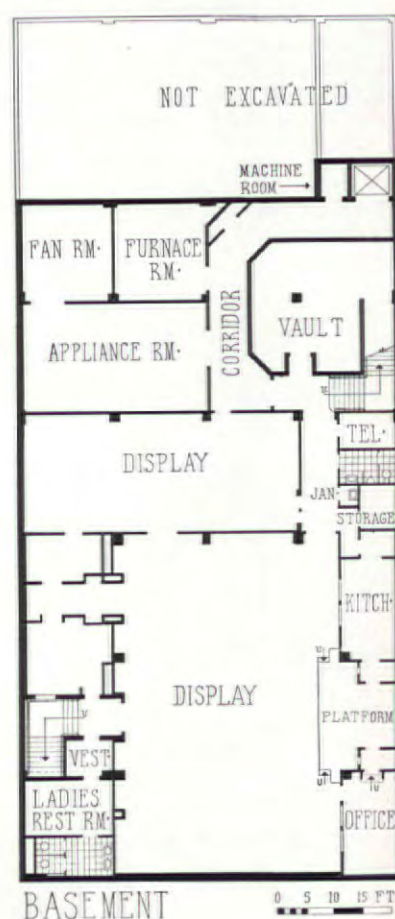
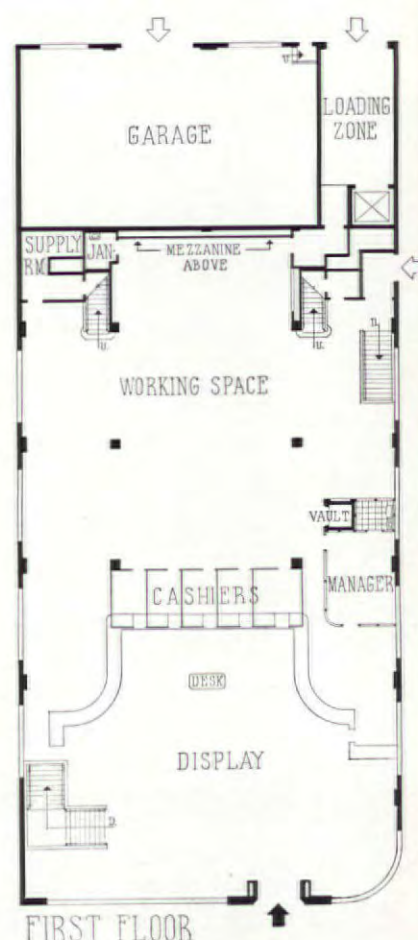
Window backs—pine. Floor coverings—Lokweave seamless throughout, Bigelow-Sanford Carpet Co. Wall coverings—knotty pine for all paneling. Hardware—Albert Voight Mfg. Co., Inc. Ceilings—calcimine. Lighting fixtures—Creative Lighting Fixture Co. Furniture—Warren McArthur Corp. Show cases—maple and plate glass, Pittsburgh Plate Glass Co. Mirrors—Pittsburgh Plate Glass Co. Complete installation by S. S. Silver & Co., Inc.

OFFICE BUILDING FOR THE SOUTHERN CALIFORNIA GAS COMPANY



Kelley Photos

The owners' requirements on this office and display building were that it be strictly modern in type, in order to emphasize the modernity of gas as a fuel, as well as the appliances for sale. Use of the basement as display space made necessary the construction of clear-span girders, while other special structural features were required by the plan to add a story at some future date. The major part of the street floor is given over to cashiers' booths and working space; this portion of the building takes care of about 100,000 accounts. Most successful is the handling of the exterior, with its large display windows and well-organized lettering which at night is silhouetted against lighted panels. The cost of the building, including earthquake-proof construction and provision for the additional story, was about \$168,000. Cubage: 326,000.



CONSTRUCTION OUTLINE

STRUCTURE: Exterior walls—reinforced concrete; inside plastered. Interior partitions—hot-rolled expanded steel, Bethlehem Steel Corp., studs with adjustable floor and ceiling clips, Kalman Steel Corp., Thermax slabs anchored with clips; plaster Diamond mesh metal lath and channel for furring, Celotex Corp. Floor construction: First and mezzanine—concrete. Second—wood on steel framing.

ROOF: Temporary roof of wood joists and composition roofing.

SHEET METAL WORK: Flashing—galvanized iron.

INSULATION: Mezzanine—2 in. rock-wool, U. S. Gypsum Co. Acousti-Celotex tile for entire working and public space on first floor, Celotex Corp.

WINDOWS: Sash—W. C. Lea. Glass— $\frac{1}{4}$ in. plate for show windows.

STAIRS AND ELEVATORS: Stairs—concrete. Elevators—Hydro-electric plunger elevators—Otis Elevator Co.

FLOOR COVERINGS: First floor and public stairs to basement—gray Tennessee marble, blue Belgian border. Working space and mezzanine—covered with battleship linoleum. Toilets—vitreous ceramic tile. Manager's office—carpet.

WOODWORK: Basement: Door frames and trim—oak. First floor manager's office—walnut veneer. Entrance door—bronze satin finish, Ellison Bronze Co. Other exterior—kalamein, California Fireproof Door Co.

HARDWARE: Lock sets, Schlage Lock Co. Butts—Stanley Works. Lavatory door hardware—Bonmer Spring Hinge Co.

PAINTING: Interior: Walls—3 coats semi-glossy. Trim and sash—2 coats enamel; all paints by Scriver & Quinn. Floors—cement, acid stain, Color Control Co. Exterior: Walls—concrete, Cemelith waterproof coating, Super Concrete Emulsions, Ltd.

ELECTRICAL INSTALLATION: Switches—Diamond D. Electric equipped for power and lighting. Fixtures in working space—indirect, A. F. Feldman Co. All soffit and special fixtures by Schweitzer Bros. Others—Holophane, Curtis, Ivanhoe, and Kopp & Co. Luminous panels on exterior and interior window lighting, stainless steel trim with silhouette letters, Luminous Structures, Inc.

PLUMBING: Fixtures by Standard Sanitary Mfg. Co.

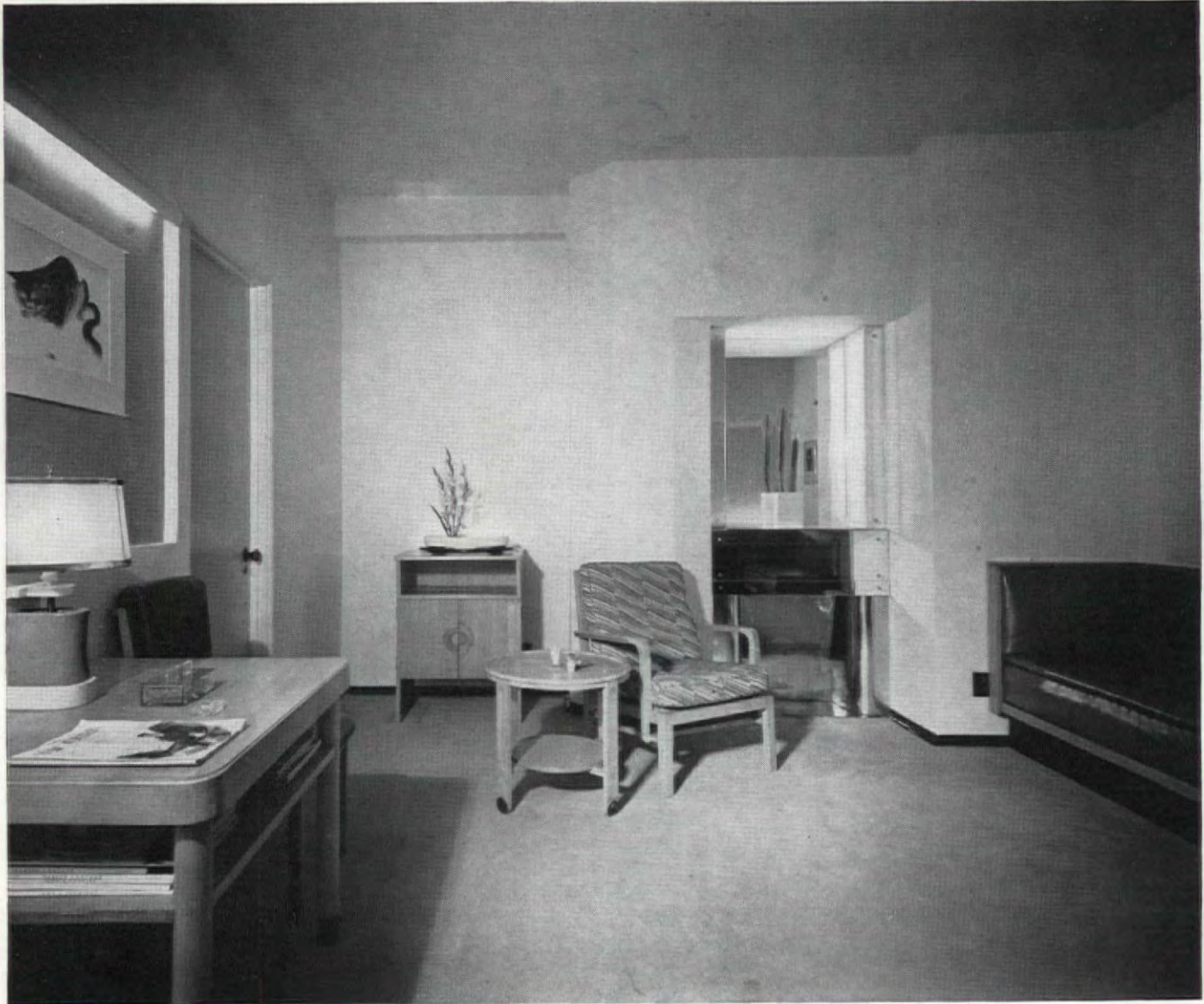
HEATING AND AIR CONDITIONING: Payne forced draft, gas-fired furnace, thermostatically controlled. Fans for ventilating equipped with variable speed clutch device; air filters; and arranged for future air conditioning equipment. All by Payne Furnace Co. Boiler—hot water, Bryant No. 4 Model 22, storage tank, Bryant Heater Co.



DISPLAY SPACE, FIRST FLOOR



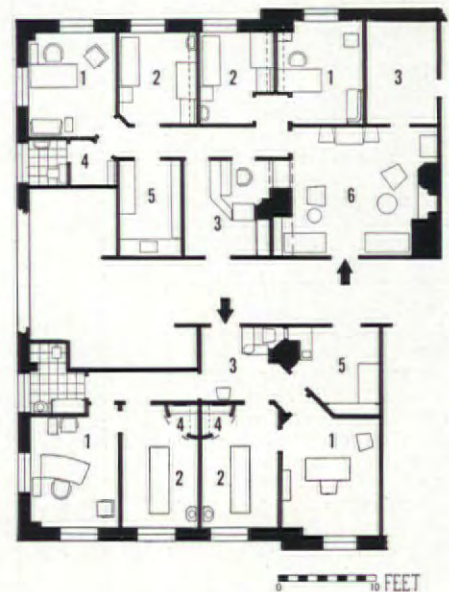
DOCTORS' OFFICES FOR DR. B. F. FEINGOLD AND DR. J. M. HARRIS,



RECEPTION ROOM

Fred R. Dapprich Photos

These offices were designed for a pediatrician and an obstetrician whose suites are operated separately, but who jointly use the reception room, main office, and switchboard. Due to the peculiarities of the floor plan, and the number of offices required, many of the rooms are necessarily quite small, a fact which partly explains the unusual amount of equipment that was specially designed and built. This equipment includes desks, cabinets, benches, lighting fixtures, and certain medical appliances. The solution is particularly interesting for the variety of designs, each exactly fitted to the differing requirements of the offices; all are executed with distinguished simplicity and assurance. Details and photographs of some of the pieces are shown on the following pages.

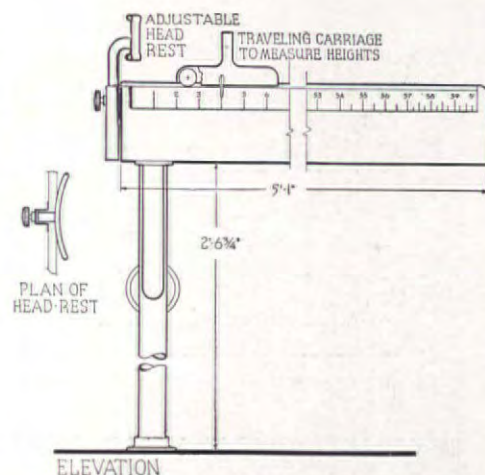
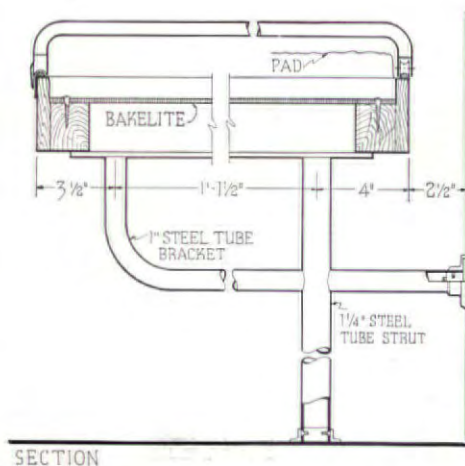
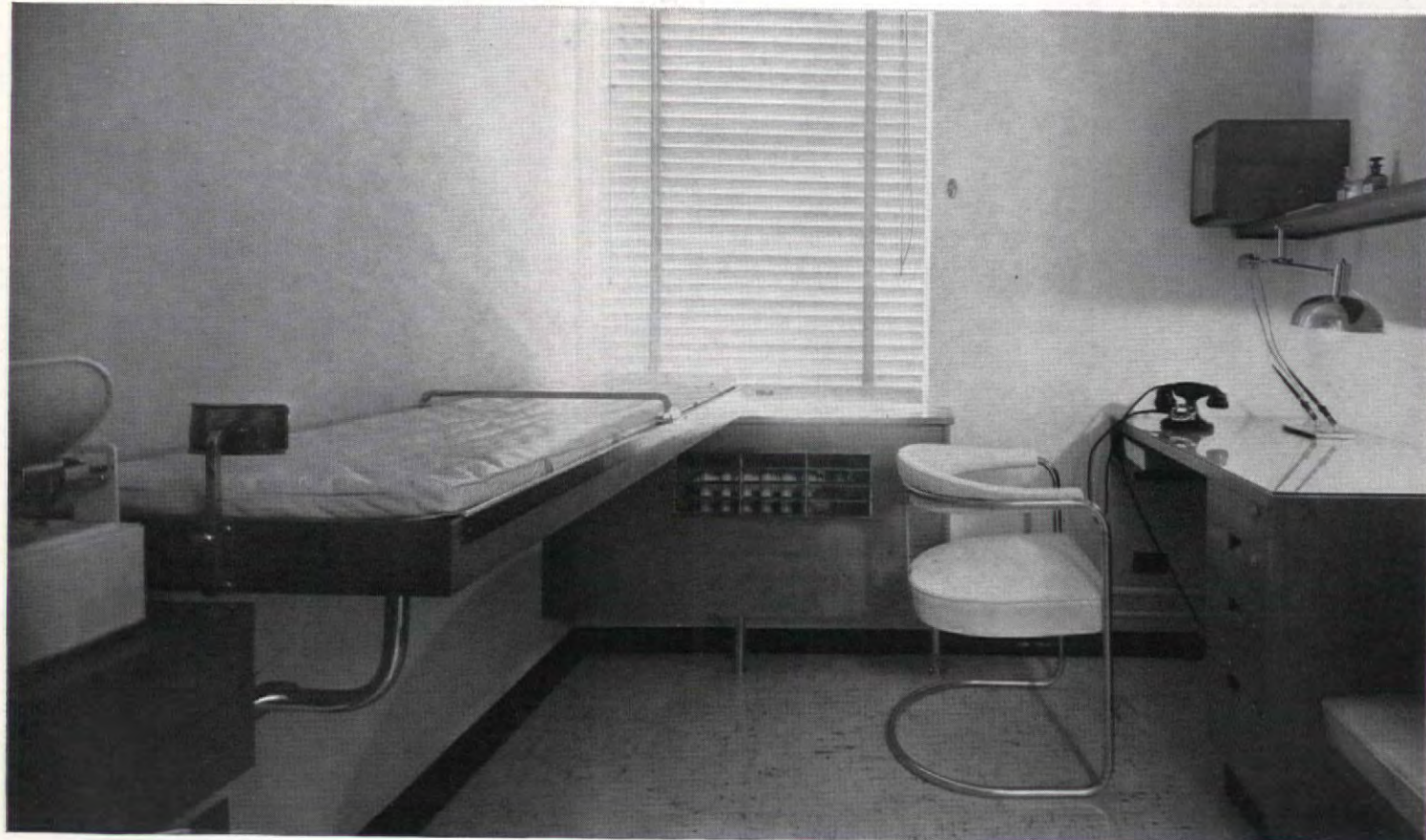


- | | |
|----------------------|---------------------|
| 1. CONSULTATION ROOM | 2. EXAMINATION ROOM |
| 3. OFFICE | 4. DRESSING ROOM |
| 5. LABORATORY | 6. RECEPTION ROOM. |

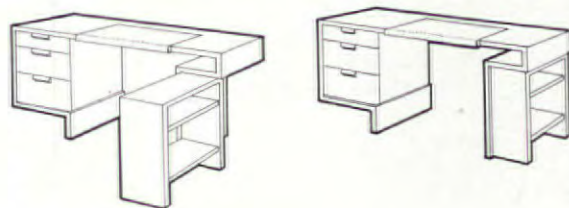
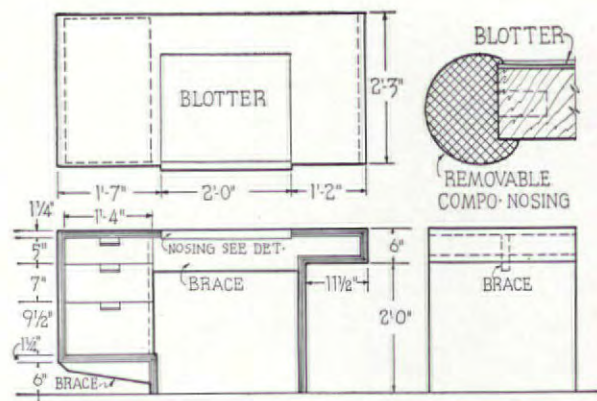
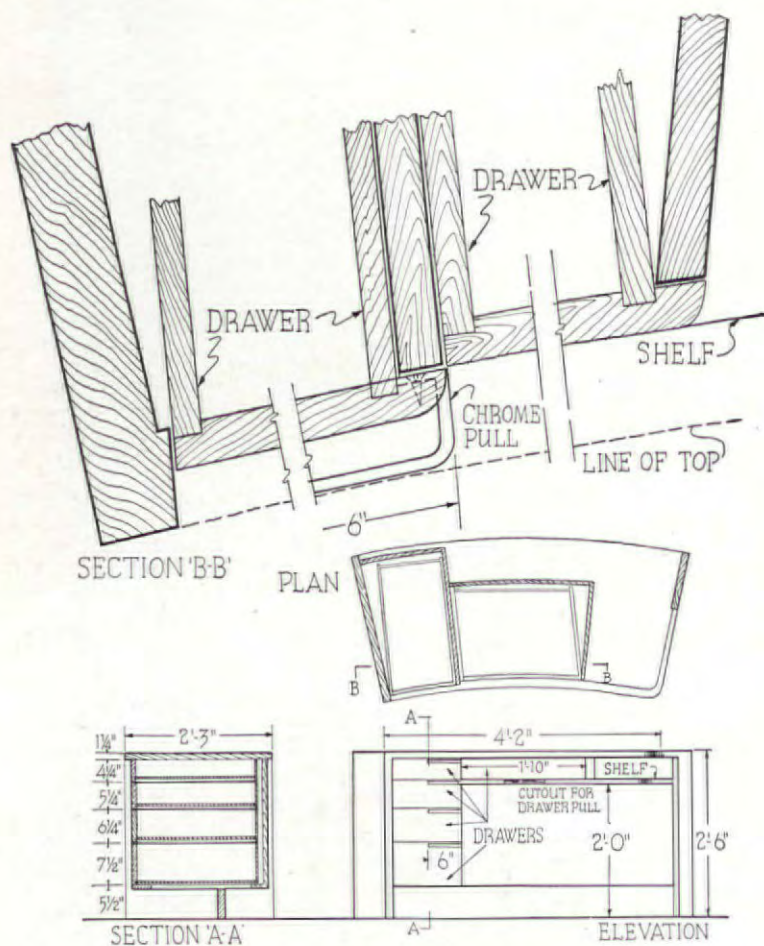
FINISHES AND EQUIPMENT

Floor coverings—Royalite rubber tile and Alexander Smith & Sons' carpet. Walls—plaster and putty coat. Trim—Superior metal trim. Slab doors—Frank Graves Door & Sash Co. Hardware—Dresslar Hardware Co. Painting—Dutch Boy white lead, National Lead Co. and Luminall, National Chemical & Mfg. Co. Lighting fixtures—Strickley, Stein & Gerard. Plumbing fixtures—Standard Sanitary Mfg. Co. Venetian blinds—Venetian Blind Corp. Reception room furniture—F. W. Hess Upholstering Co. Examination and consultation rooms by Edgar Graber, and by Henderson Custom Built Furniture Co.

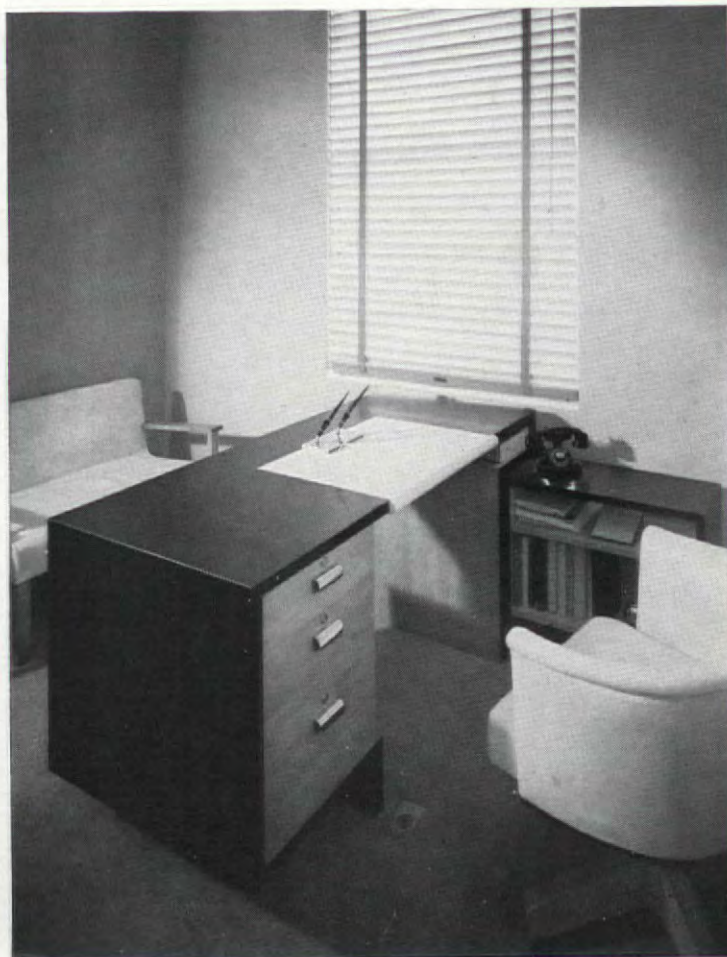
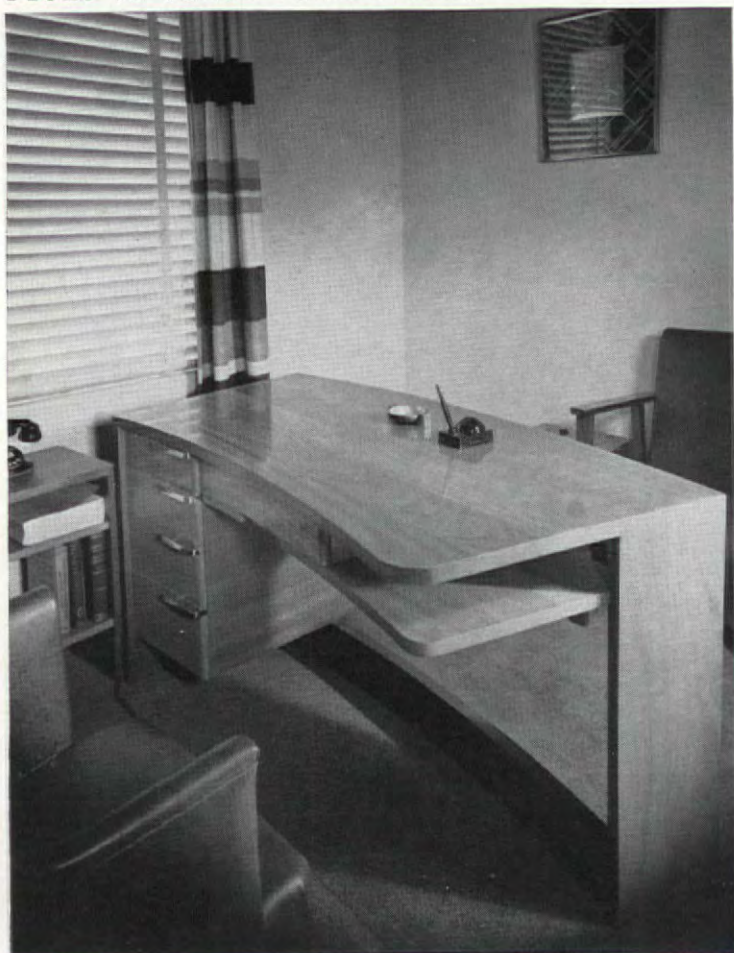
The examination room in the pediatrician's office, illustrated below and at the right, was designed to allow the physician maximum freedom of movement in a small space. The member supporting the examination table has been kept well out of the way, and an ingenious traveling carriage allows the table to be used for measuring heights.

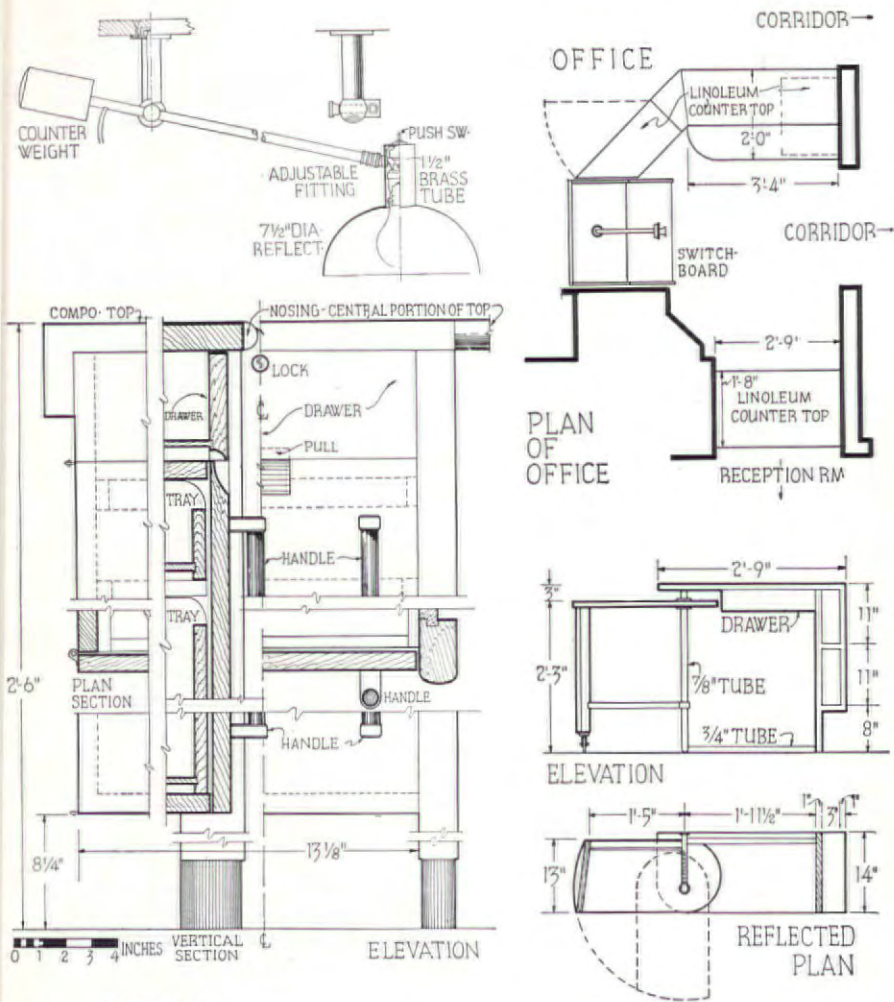
**EXAMINATION ROOM**

DOCTORS' OFFICES, LOS ANGELES, CALIF.



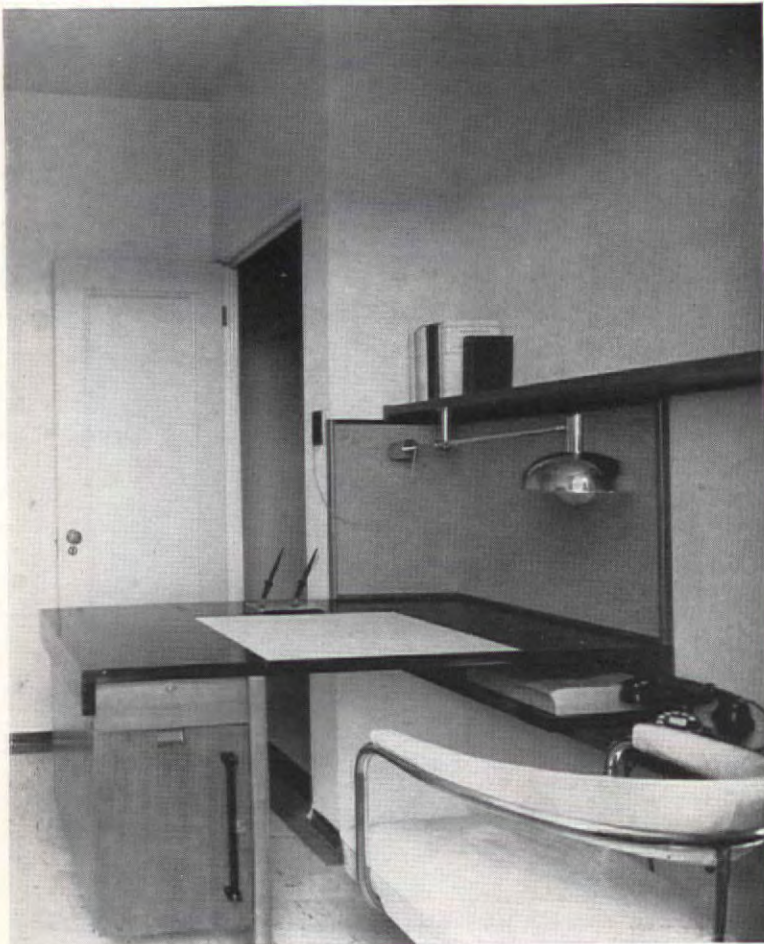
DESKS IN CONSULTATION ROOMS



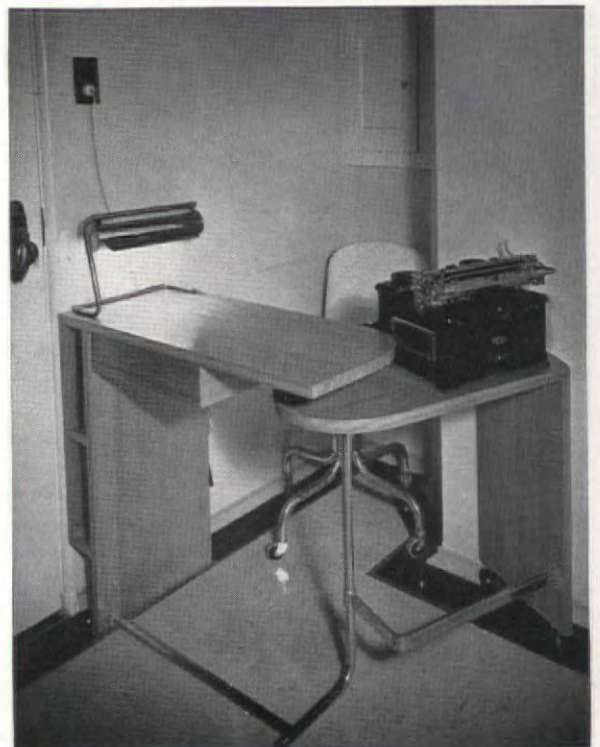


OFFICE

DESK DETAIL

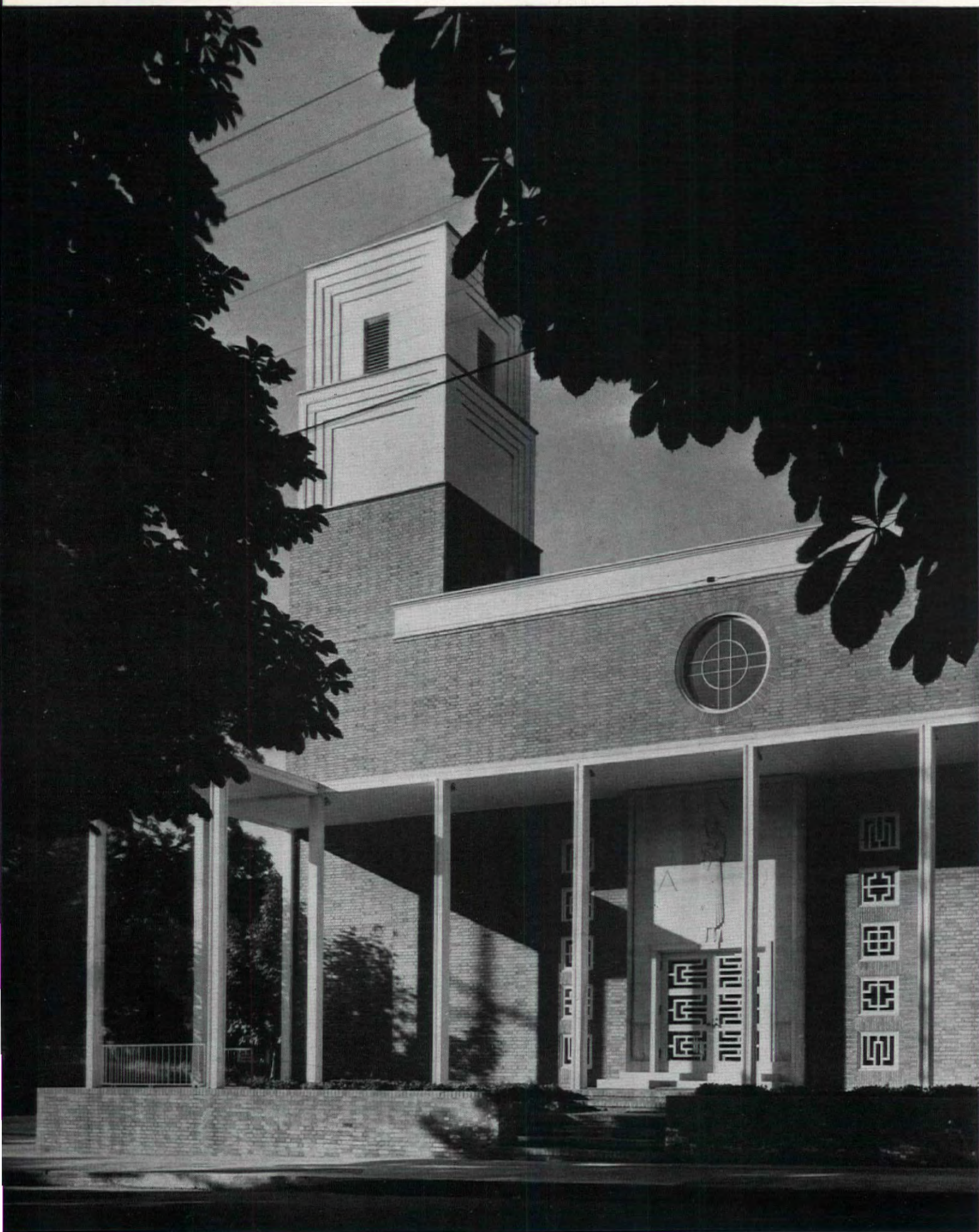


DESK DETAIL



MORTUARY

FOR J. P. FINLEY AND SON, PORTLAND, OREGON

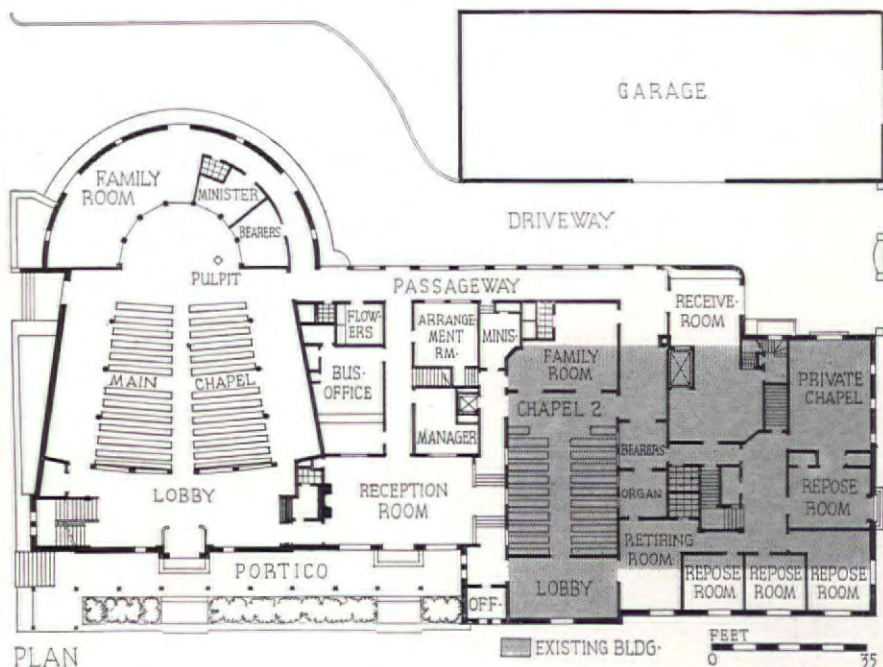


Eileen Jourdan



BEFORE

Erven Jourdan

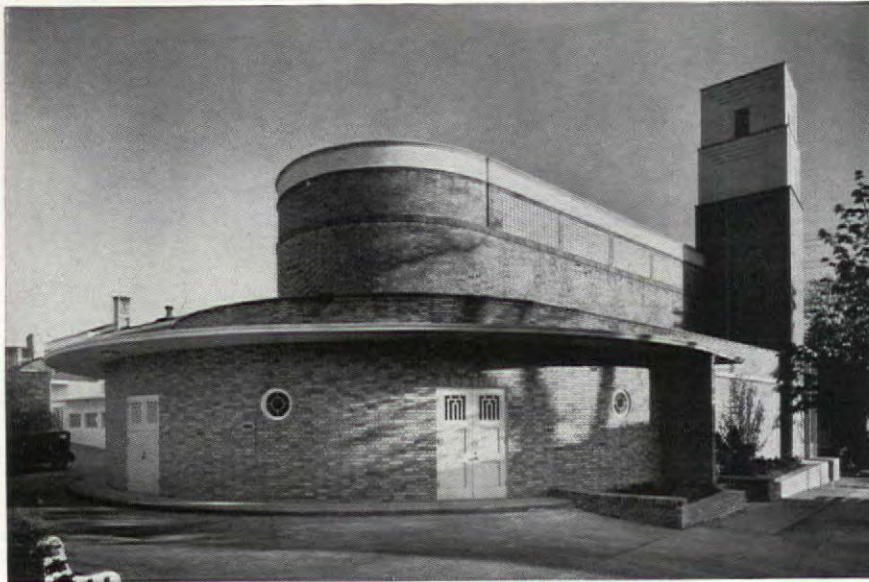


MAIN CHAPEL



Boychuk

About half of the present building is new, as shown by the plan; the remainder is a remodeling so drastic as to suggest an almost complete rebuilding of the older structure. As noted by the architects, the problem presented by a mortuary includes a number of very special requirements: it must convey no impression of denominationalism, as all creeds are generally served; it must make provision for privacy, for the admission of the public, for the unobtrusive carrying out of its functions, and for the holding of funeral services; it should be dignified. The photographs and plan show how well these requirements have been met; while the building has sufficient ecclesiastical character, it favors no particular denomination. Similarly the plan meets every conceivable circulation requirement. In the details of the furnishings and accessories equal restraint is shown. The total cost of the alteration and new construction, including complete furnishings, but exclusive of the architects' fee, was about \$105,000.



Boychuk Photos

CONSTRUCTION OUTLINE

FOUNDATIONS: Footings and walls—concrete. Water-proofing—Minwax asphalt on concrete walls; Minwax clear on exterior brick, Minwax Co.

STRUCTURE: Concrete walls with brick facing, on all new street fronts, Willamina Clay Products; Indiana limestone entrance; stucco on concrete for driveway; brick on old wood and stucco walls. Interior—plaster finish with exception of main chapel walls which have Philippine mahogany flat panels set on furring strips on concrete. Interior partitions—concrete for large chapel; wood studs for remainder. Columns—concrete. Floor construction—wood throughout.

ROOF: Concrete beams and wood purlins and sheathing. Composition roofing on new portion, The Philip Carey Co.; wood shingles on old portion.

SHEET METAL WORK: Flashing—4 lb. lead on curved portion; balance galvanized steel.

INSULATION: Roofs—aluminum foil under flat roof between joists, Reynolds Corp. Large chapel ceiling—diamond shaped sheets of Type C Absorbex, The Celotex Corp.

WINDOWS: Sash—steel, Truscon Steel Co. Glass—double strength, quality A, flat drawn sheet, Libbey-Owens-Ford Glass Co. Obscure glass—Velvex, Blue Ridge Glass Co. Glass bricks in main chapel, Owens-Illinois Co.

ELEVATOR: One small passenger elevator, Otis Elevator Co.

FLOOR COVERINGS: Asphalt tile in basement over concrete, Thomas Moulding Floor Co. Vitreous tile in operating rooms, Cambridge Tile Co. Carpet throughout first floor, Philadelphia Carpet Co.

WALL COVERINGS: Chapel and entry—Philippine mahogany. Reception room—canvas. Offices, display and repose rooms—wallpaper, W. P. Fuller Co.

WOODWORK: Trim and doors—Philippine mahogany for panels; elsewhere Douglas fir painted.

HARDWARE: Hardware by the Barrows Lock Works as manufactured by the Yale & Towne Mfg. Co. Butts—Stanley Works. Door checks—The Norton Co.

PAINTING: Walls—lead and oil. Ceilings—lead and oil and casein. Trim and sash—lead and oil and enamel. Exterior: Walls—special cement paint. Paints by W. P. Fuller Co.

ELECTRICAL INSTALLATION: Switches—General Electric Co. Fixtures—Baker-Barkon Corp.

PLUMBING: All fixtures by Standard Sanitary Mfg. Co. Pipes: Soil—cast iron below grade, galvanized steel above grade. Water supply—galvanized steel, Walworth Co. valves and fittings. Pump—Worthington Pump & Machinery Co.

HEATING AND AIR CONDITIONING: Original building heated by a forced circulation hot water system, using direct cast iron radiation. Chapel, reception room and new offices are air conditioned by a central fan system. The air is tempered, washed and humidified, then reheated by booster coils in the ducts supplying various rooms which have individual controls. Boiler—American Radiator Co. Ray Automatic Fuel Oil Burner under pressure control, Ray Oil Burner Co. Radiators—Corto, cast iron, American Radiator Co., Aerofin copper heating coils. Valves—Walworth and Crane companies. Thermostat—Johnson Service Co. Fans and air washer—B. F. Sturtevant & Co.

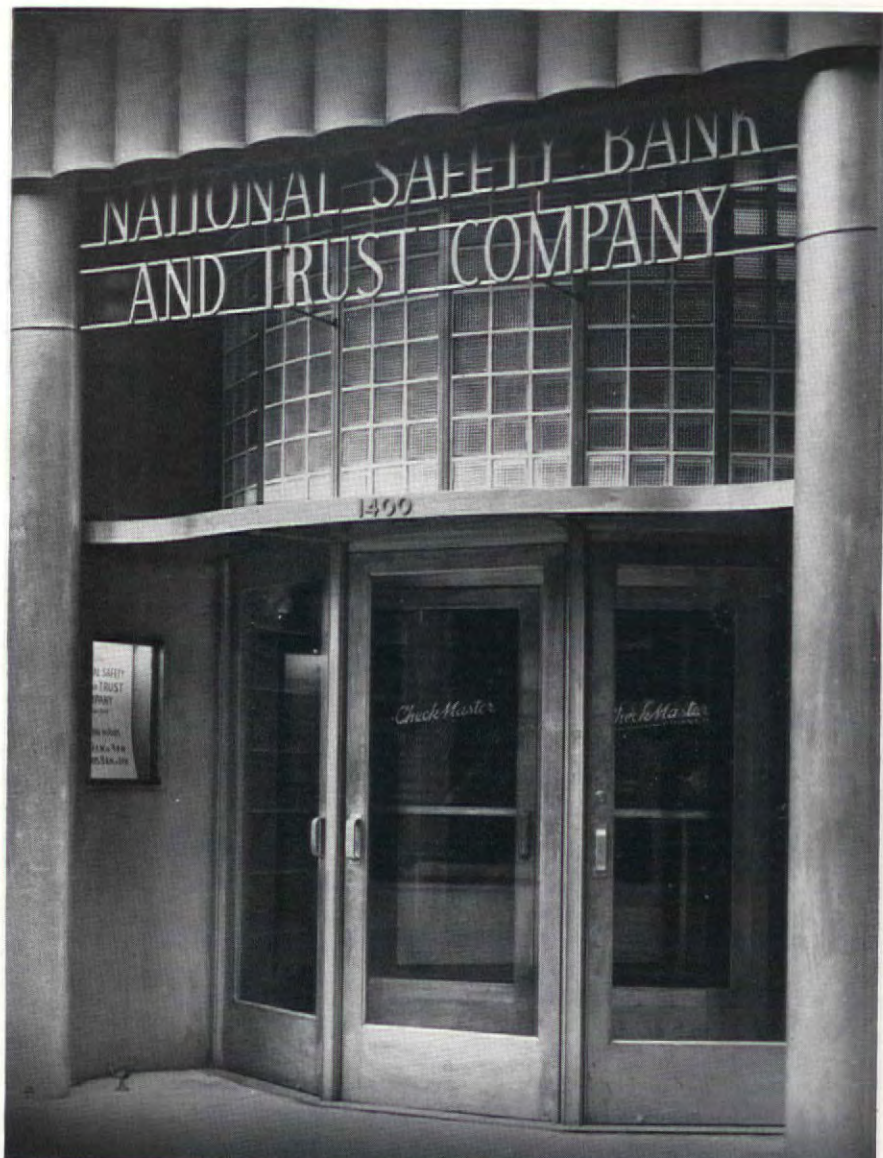
SPECIAL EQUIPMENT: Venetian blinds—Bunnett Venetian Blind Co. Public address system—R. A. Gardner.

FAMILY ROOM

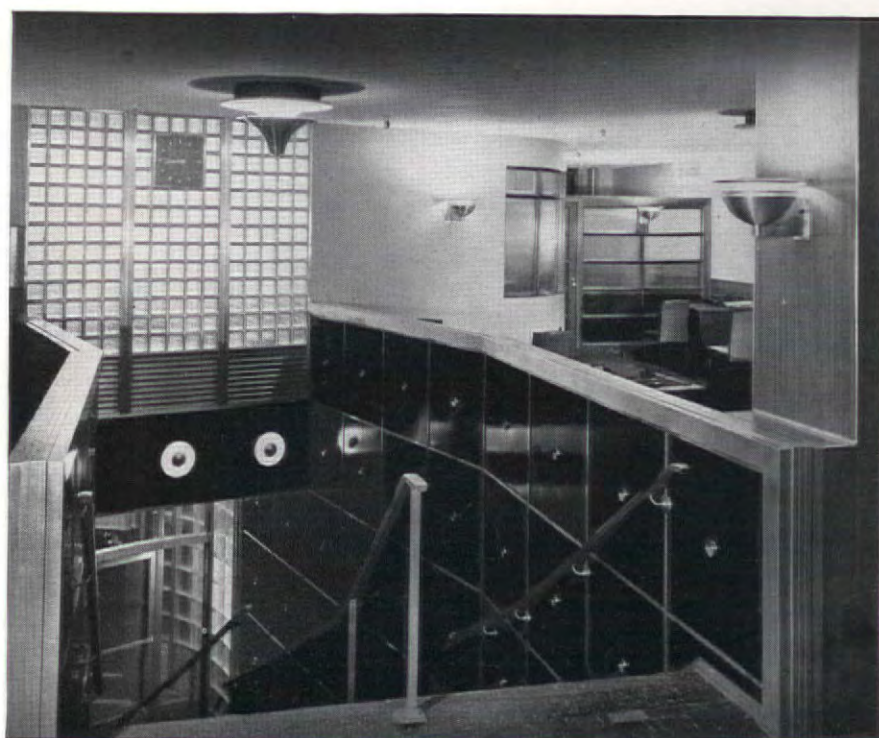
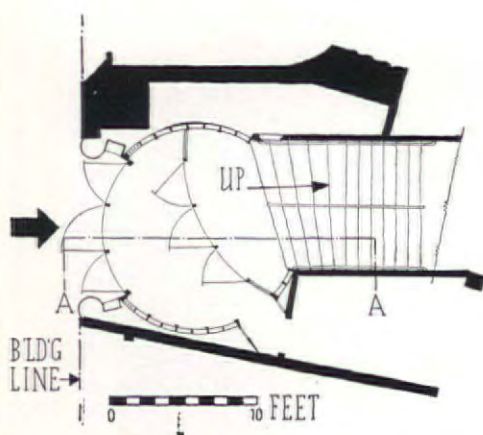
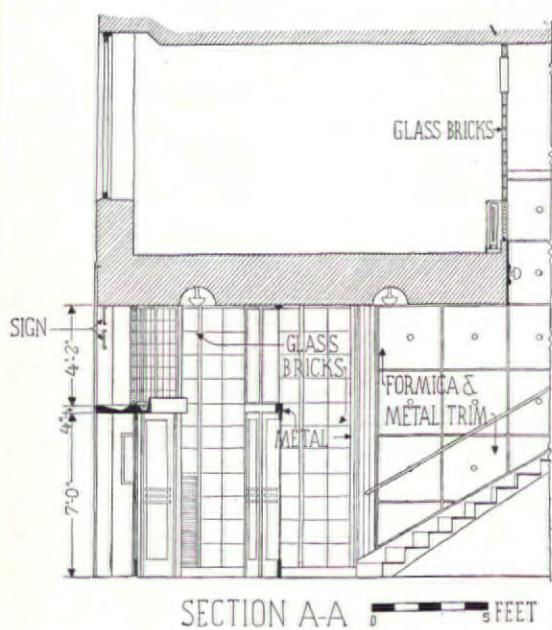


BANK NATIONAL SAFETY BANK AND TRUST CO., NEW YORK CITY

EUGENE SCHOEN & SONS,
ARCHITECTS



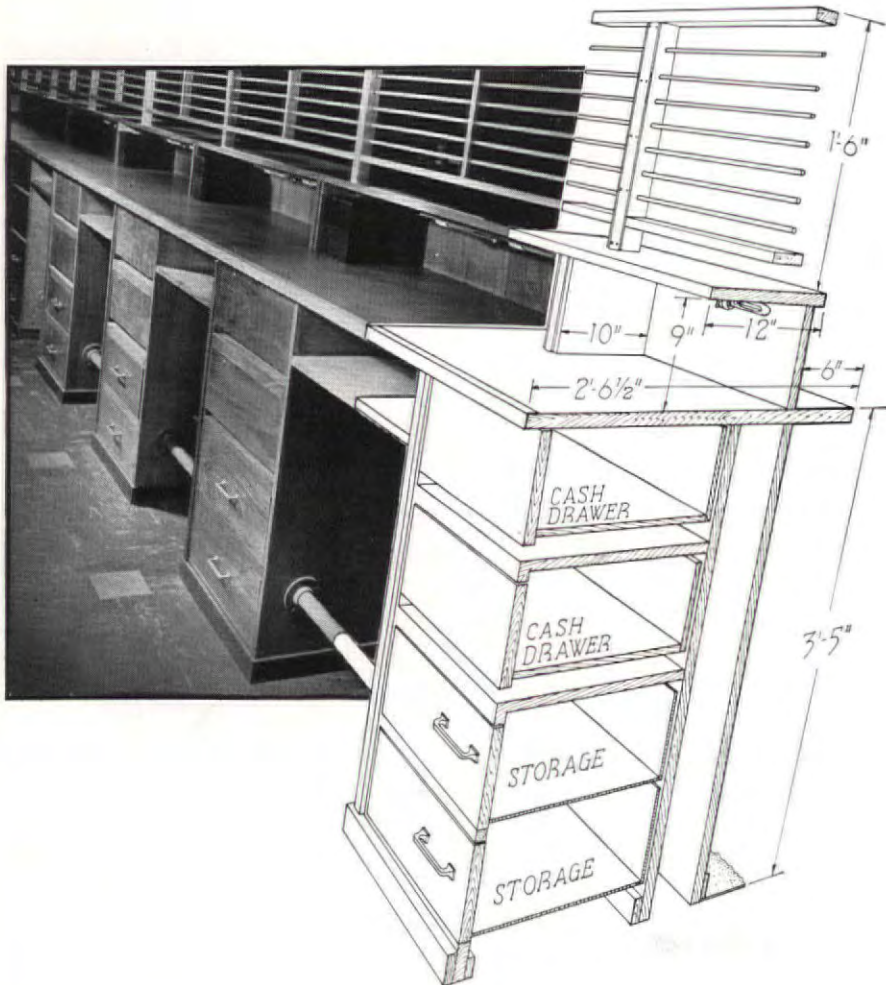
Robert M. Damora Photos





Quarters for this bank were found on the mezzanine level of an office building, a location which, while unconventional, had already been proved practicable. To provide direct, independent access from the street below, a new entrance and stairway were built. The low ceiling, further reduced by air conditioning ducts, presented another problem which was solved by a strongly horizontal treatment and by the ingenious combining of lighting fixtures with the banking screens. Specially designed standard units and screens for the tellers have made possible a highly efficient use of the available space. The few other required pieces of furniture were designed to harmonize with the units and the veneered walls. The total cost of the alteration, including the architect's fee, was \$45,000.





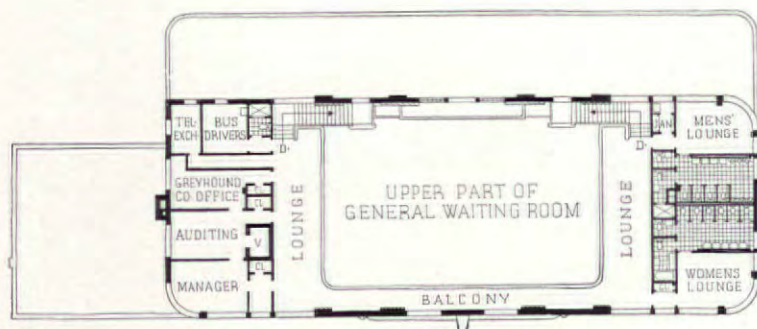
FINISHES AND EQUIPMENT

Sound insulation—hung ceiling soundproofed by use of acoustic plaster, California Stucco Products Co. Glass blocks: Exterior—Owens-Illinois Glass Co. Vestibule and interior—Corning Glass Works. Floor coverings—composition tile, Tile-Tex Co. Wall coverings: Columns at head of stairs and wainscoting in offices—covered with linoleum, Sloane-Blabon Corp. Side walls in halls—Formica panels, Formica Insulation Co., with aluminum trim. Trim and interior doors—American walnut. Main entrance doors—extruded bronze outside, aluminum inside, Aluminum Co. of America sections, manufactured by the Penn Brass and Bronze Co. Door hinges—Rixson Co. Lighting fixtures: Wall and bank screen indirect Luminaires, Curtis Lighting Co. Ceiling fixtures—located on plaques for future air conditioning supply. Entry and stair hall—specially designed with Holophane lens unit in bottom, Holophane Co. Duct work and plenum chambers provided for future air conditioning.

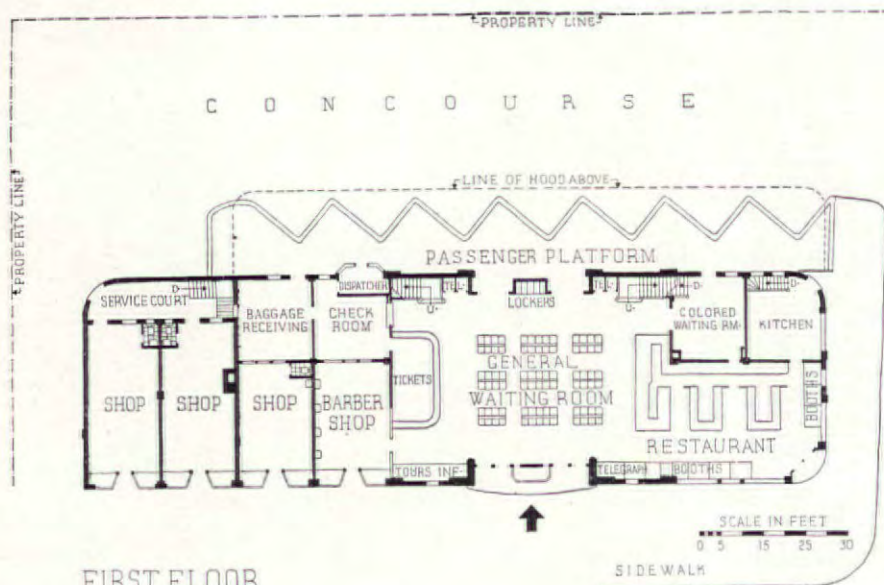


BUS TERMINAL FOR GREYHOUND LINES, LOUISVILLE, KY.

WISCHMEYER, ARRASMITH & ELSWICK, ARCHITECTS



SECOND FLOOR



FIRST FLOOR

WAITING ROOM



The design of bus terminals has rapidly developed to a point where plans exhibit a considerable degree of standardization. Such features as the two-story waiting room with offices and washrooms on the mezzanines, the sawtooth platform, and the concentrated arrangement of services are now in general use. The disproportionate space requirements for the bus platform and the waiting rooms and offices have led to the practice of including shops for rent where the location justifies it. In its exterior design this building is similar to others erected by the company, with a simple horizontal treatment, and a facing of blue enameled metal. Cubage: 354,000. Cost: \$75,160, at 21 cents a cubic foot.

CONSTRUCTION OUTLINE

STRUCTURE: Exterior walls—masonry faced with blue porcelain enamel on 16 gauge Armco metal pans, fastened to 2 in. Armco iron channels, American Rolling Mill Co.; channels fastened to masonry with cadmium plated Parker-Kaelin masonry nails. Enamel by Porcelain Metal Products Co. Floor and roof slab—2 in. concrete over bar joists. Interior wall finish—colored plaster.

ROOF: Five-ply built-up composition roofing.

WINDOWS: Projected, heavy section type, Truscon Steel Co.

FLOORS: Asphalt tile, Tile-Tex Co.

WOODWORK: Selected gum; interior doors—slab type, Roddis Door Co.

HARDWARE: White metal satin finish, Russell & Erwin Mfg. Co.

ELECTRICAL INSTALLATION: BX cable and rigid conduit. Sound amplifier system. Fixtures by Edwin F. Guth Co.

KITCHEN EQUIPMENT: Counters and sinks—Monel Metal, International Nickel Co. Refrigeration—Norge Co.

PLUMBING: All fixtures by Standard Sanitary Mfg. Co. Pipes: Supply—copper tubing. Waste—extra heavy cast iron.

HEATING: Vapor steam: Ideal boiler, Corto radiators, American Radiator Co., John J. Nesbitt Co. unit heaters.



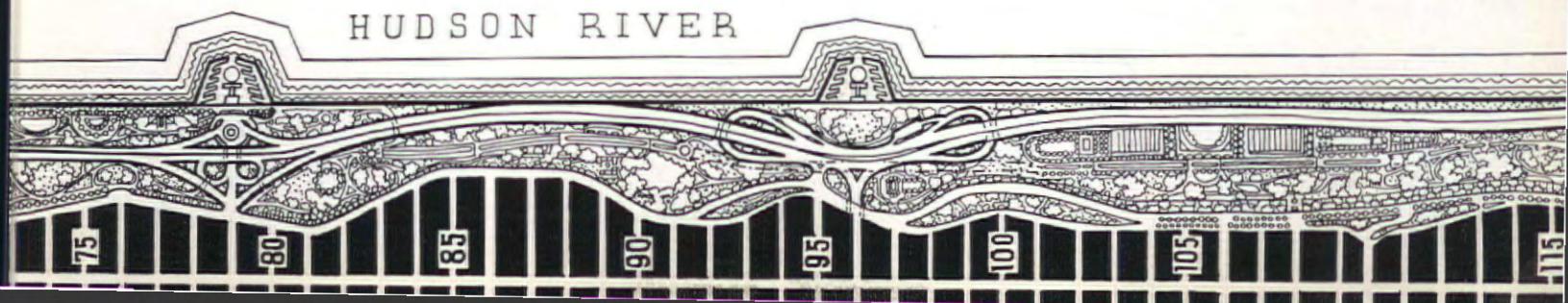
PUBLIC

WEST SIDE IMPROVEMENT, NEW YORK CITY, DEPARTMENT OF PARKS



ROBERT MOSES, COMMISSIONER; MADIGAN-HYLAND, ENGINEERS; EMIL H. PRAEGER, CHIEF ENGINEER; CLINTON F. LOYD, CHIEF, ARCHITECTURAL DESIGN; GILMORE D. CLARKE, CONSULTING LANDSCAPE ARCHITECT

HUDSON RIVER

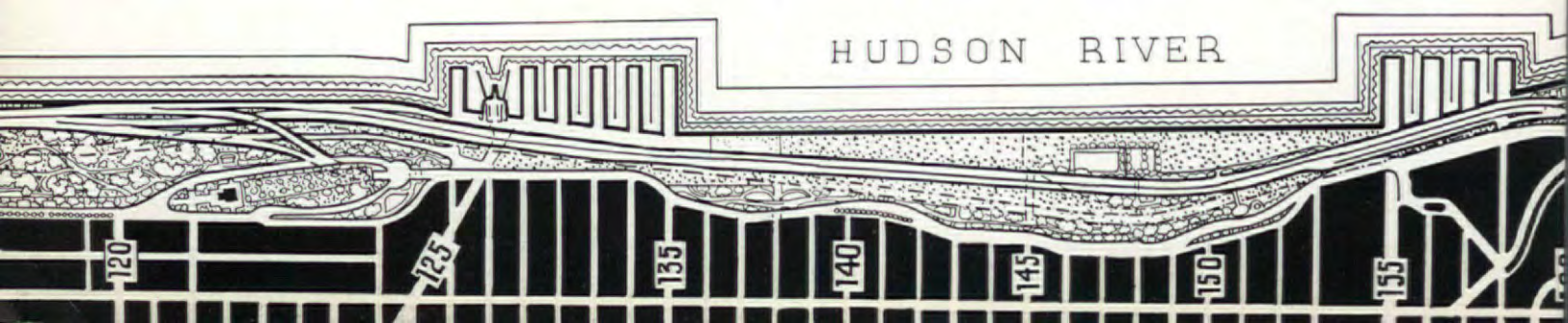




Fairchild Aerial Surveys

As far back as 1890 New York has been trying to solve the problem of developing the land along the Hudson River, a problem complicated by the fact that through this area runs a highly important railroad. It was not until 1934 that a comprehensive plan was adopted and work started. At this time Robert Moses, the energetic head of the consolidated city-wide Park Department, came into the picture, beginning the enormously complicated task of unraveling the tangle of financial problems, making adjustments with the railroad and other agencies involved, and supervising the preparation of a plan. At the end of three years the Park Department can point to the following results: 123 acres of land reclaimed from the river, with an assessed value of nearly twenty-four million dollars; railroad tracks covered by parks and highways; a traffic artery from 72nd Street to the northern tip of Manhattan Island

which makes it possible for the motorist to start at the lower end of the island and drive to the beginning of the Westchester parkways without meeting a stop light. The new park created contains dozens of playgrounds, tennis courts, football, baseball, and other sport fields, and places for riverside restaurants. A tremendous step toward eliminating traffic congestion and increasing the amenities, the project is notable for its superlative planning, the most spectacular part of which is shown on the preceding page, where cars entering and leaving the express highway take only right-hand turns, where the traffic circle consists of a sunken fountain and sheltered loggias, under which parking space for about 200 cars is provided. Few public projects can demonstrate more forcefully the advantages of a progressive civic administration, working in collaboration with the best technical assistance obtainable.





CHILDREN'S PLAYGROUNDS: 74TH STREET



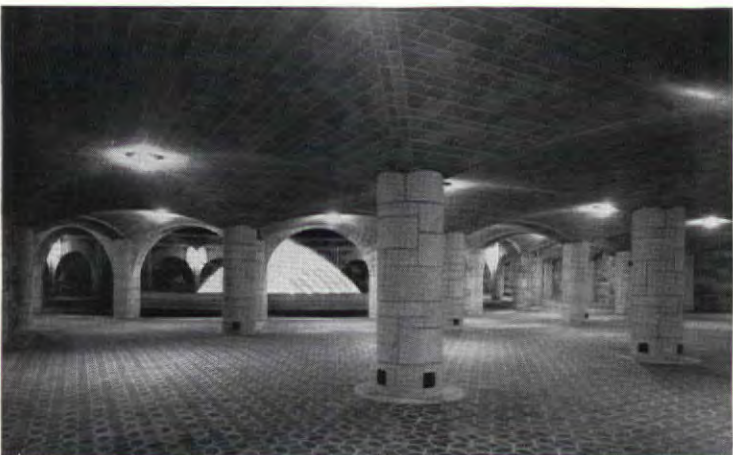
82ND STREET



HIGHWAY AND APPROACHES: 79TH STREET

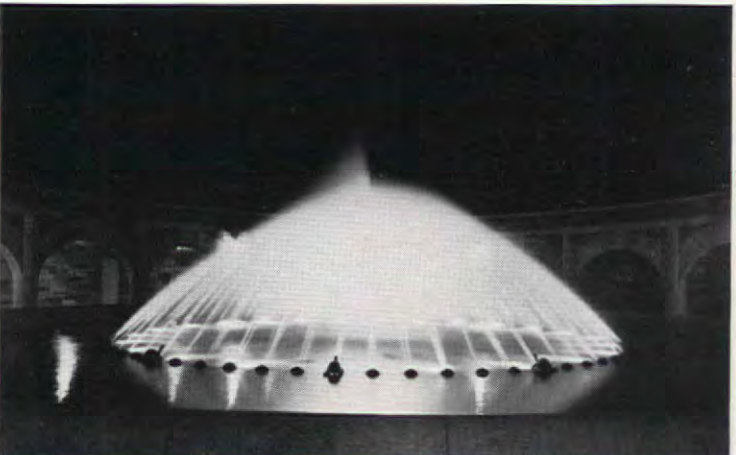


RIVER FRONT PROMENADE: 79TH STREET



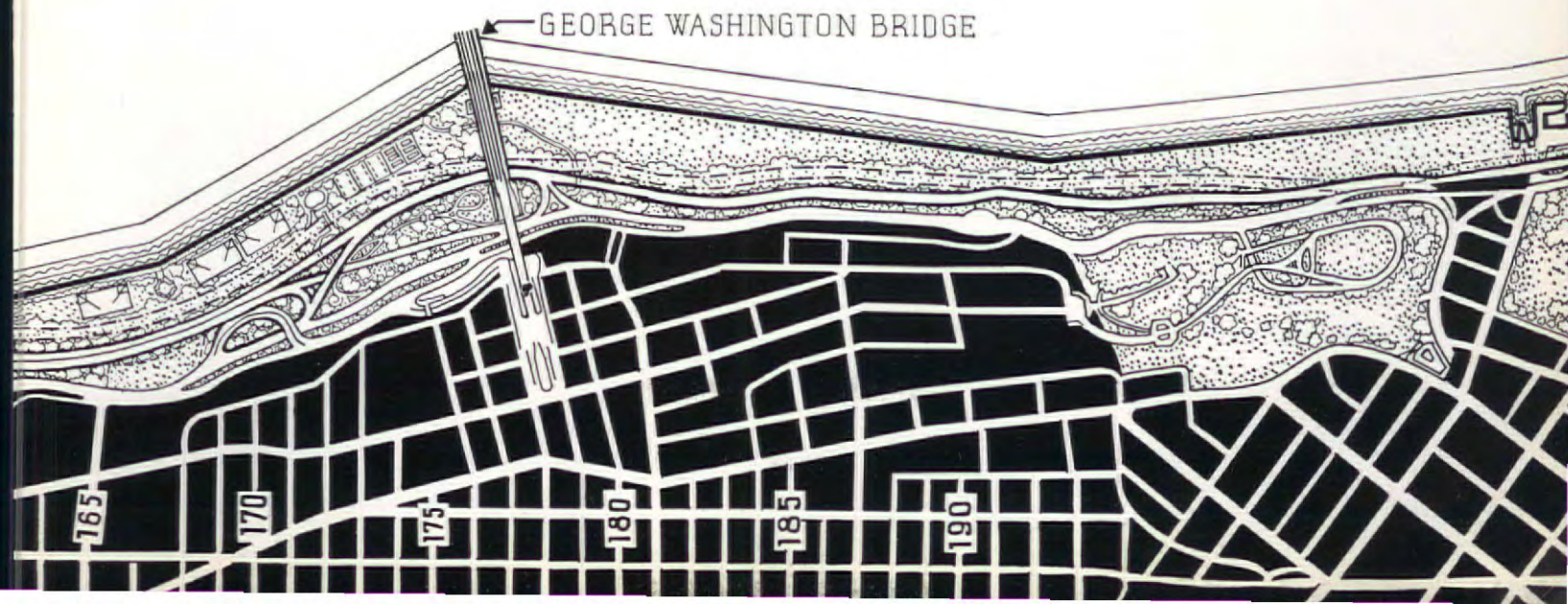
LOGGIA AND FOUNTAIN: 79TH STREET

Paul J. Woolf



FOUNTAIN—NIGHT

Paul J. Woolf





Hedrich-Blessing Photos

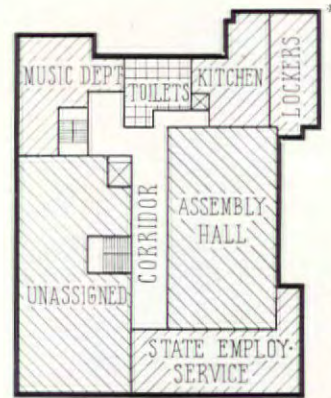


HAROLD SPITZNAGEL, ARCHITECT

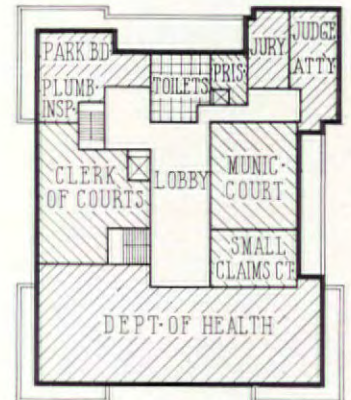
A police department, city jail, water department, rifle facilities, and assembly hall are included with the customary city offices in this compact municipal building. Executed in brick, with granite base and entrance, it expresses the trend which rejects superfluous decoration along with waste space. The interiors, of plaster or flush wood panels, reflect the conservative, unpretentious handling of the exterior. One problem which presented certain difficulties was the drop in grade, which is 20 ft. between the diagonal corners of the site, solved by the use of a strongly accented base. This same site condition, however, proved to be an asset, as it permitted access to the police department and jail on the rear. These departments were placed in an unexcavated basement, and made possible the placing of the garage on the level below. The building cost \$425,088; cubage: 842,300.



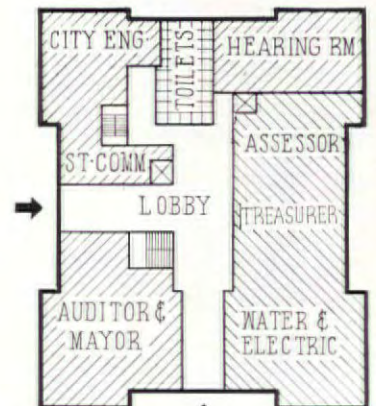
MAIN LOBBY



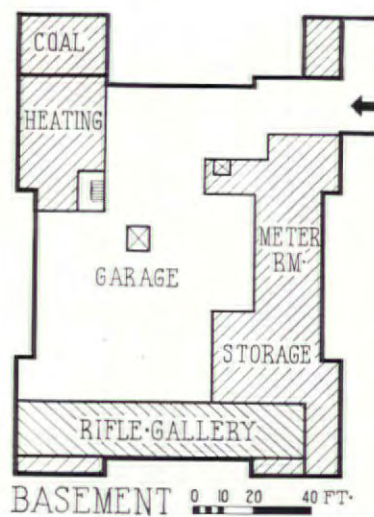
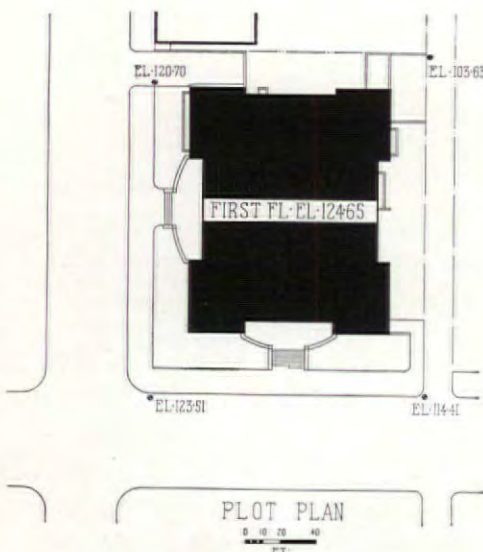
THIRD FL.



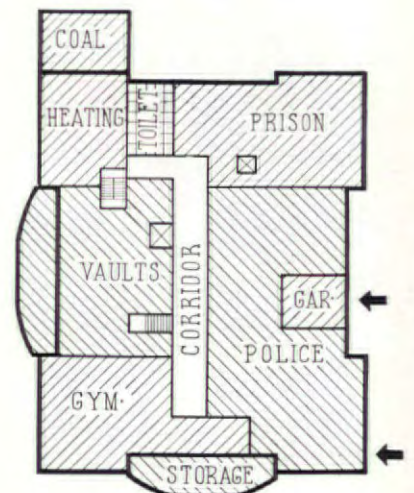
SECOND FL.



FIRST FL.



BASEMENT



GROUND FL.



MAYOR'S OFFICE



COURT ROOM

CONSTRUCTION OUTLINE

FOUNDATIONS

Footings and walls—concrete. Waterproofing—R.I.W., Toch Brothers.

STRUCTURE

Exterior walls—face brick, Belden Brick Co., mortar, Carney Cement Co., back plastered between brick and hollow tile backing; tile sprayed with R.I.W. before plastering, Toch Brothers. Interior walls—hard plaster. Base—Rainbow granite, Cold Springs Granite Co. Interior partitions—3 in. hard burned tile. Copings, spandrels and sills—Indiana limestone. Columns—concrete. Lintels—steel. Floor construction—concrete with metal pans. Ceilings—suspended metal lath.

ROOF

Barrett's specification type A-A 20-yr. Bonded roof with special flashing block, The Barrett Co.

SHEET METAL WORK

Flashing and gutters—copper.

INSULATION

Roofs—1 in. Insulite, Insulite Co. Sound insulation—Acoustone or Perfatile ceilings—U. S. Gypsum Co.

WINDOWS

Sash—Richey, Browne & Donald, Inc. Glass— $\frac{1}{4}$ in. polished plate. Screens—fastened with spring bolts, Richey, Browne & Donald, Inc.

STAIRS AND ELEVATORS

Stairs—terrazzo on concrete. Main elevator—manual control. Jail elevator—push button control, Otis Elevator Co.

FLOOR COVERINGS

Typical office—asphalt tile. Municipal and Commissioners' rooms and public spaces in front of counters—rubber tile. Toilets—ceramic tile. Remainder, except storage rooms

and basement—terrazzo. Asphalt tile by Thomas Moulding Co. Rubber tile by Wright Rubber Co.

WALL COVERINGS

Hard finished plaster used in all rooms except those requiring wood paneling in which Appalachian rift-sawn white oak was used exclusively.

WOODWORK

Trim—metal jambs; satin finish, anodized aluminum in lobby. Ornamental metal by Flour City Ornamental Iron Co. Interior doors—oak or birch; satin finish aluminum in lobby; service stair metal doors, Thorp Fireproof Door Co. Exterior doors: Revolving—satin finish aluminum, Atchison Revolving Door Co. Vestibule—Ellison Bronze Co. Garage—Overhead Door Corp.

PAINTING

Interior: Walls—3 coats stipple. Metal sash—3 coats enamel. Commissioners' room—natural finish, 1 coat lacquer sealer, 2 coats transparent lacquer. Mayor's office—white filler sprayed with 2 coats transparent lacquer. Court room—stained and finished with 2 coats transparent lacquer. Remainder of oak woodwork—natural finish. All lacquers by Pratt & Lambert.

ELECTRICAL INSTALLATION

Wiring system—thin wall conduit and General Electric Co.'s under-floor duct in offices. Switches and panel boards—Frank Adam Electric Co. Fixtures—Curtis Lighting Fixture Co., with the exception of the Holophane recessed units in court room, Holophane Co.

HARDWARE AND METAL WORK

Interior—satin finish and polished chromium plated, P. & F. Corbin. Floor checks by Rixon

Co. Metal spandrels and small plaques on exterior—deplated aluminum and polished aluminum.

PLUMBING

Lavatories—with measured flow faucets, Crane Co. Pipes: Soil—extra heavy cast iron. Water supply—copper.

HEATING AND AIR CONDITIONING

Heating—steam vacuum, valves and pump, C. A. Dunham Co. Air conditioning—filtered warmed air is provided by Herman Nelson Co.'s Magnavent unit machines in the Commissioners' and Assembly rooms: American blower fan and vento coils located in penthouse for providing fresh air in Municipal court room. Boilers—Kewanee Boiler Co. Method of firing—coal; stokers by The Brownell Co. Radiators—concealed in all wood paneled rooms, Crane Co. Valves—Crane Co. Johnson temperature control throughout building, Johnson Service Co.

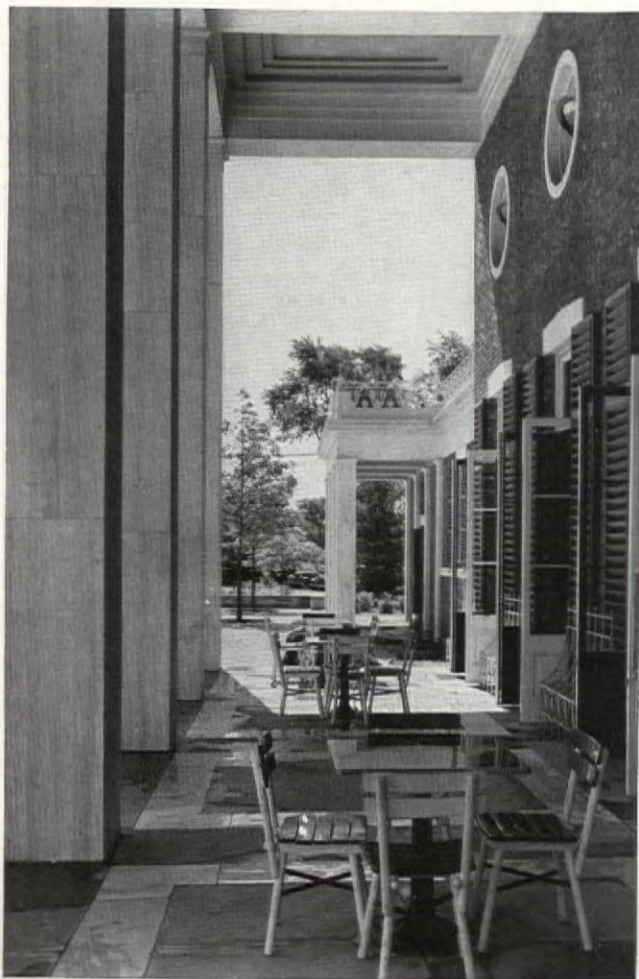
SPECIAL EQUIPMENT

Desks and aluminum chairs by General Fireproofing Co. Metal counters—Yawman & Erbe Mfg. Co. Filing cabinets—Globe-Wernicke Co. Special designed wood desks—Leopold Desk Co. Specially designed wood chairs—B. L. Marble Chair Co. The jail was completely equipped by the Pauly Jail Building Co. Underground sprinkler system for lawn, Mueller Mist Co. The three frescoes in Commissioners' room were executed by Edwin Boyd Johnson of Chicago, Ill. The granite low reliefs over entrance door were modeled by Mrs. Hugh Seaver, Cleveland, O. The twenty limestone abstractions above windows were modeled by Palmer Eide, Augustana College, Sioux Falls.

CLUB HOUSE FOR GOLF COURSE, PELHAM BAY PARK, BRONX, N. Y. C.



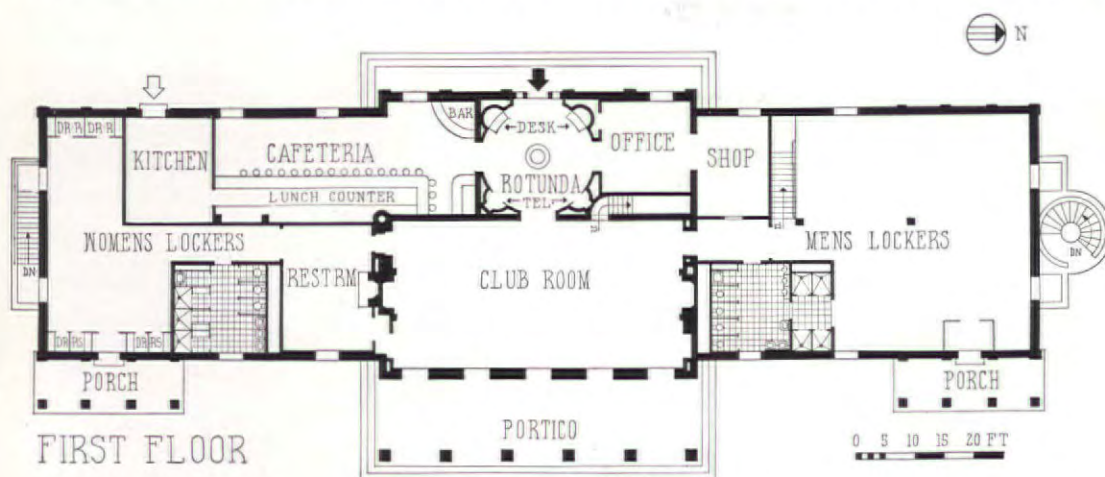
Samuel H. Gottscho Photos



In an effort to provide suitable buildings in its various parks and other recreational centers, the New York City Park Department has built structures with style varying from a casual eclecticism, as here, to modern, the choice depending on the character of the surroundings, use of the building, and type of labor available. The last factor was of particular importance in this case as relief labor was used, and the ratio of labor to material was kept as high as possible. As in its many other buildings, the Park Department has wisely maintained a certain intimacy of scale, particularly appropriate in this instance, where peak crowds do not exceed 1,000 in a day. Less fortunate, perhaps, was its insistence on the arbitrary enclosure of an essentially unsymmetrical plan within a rigid and formal framework. Given this limitation, however, no such criticism could be made of the building or the manner in which it has been related to its surroundings.



DEPARTMENT OF PARKS, CITY OF NEW YORK; ROBERT MOSES, COMMISSIONER



CONSTRUCTION OUTLINE

STRUCTURE: Walls—brick, Dutch Bond. Exterior columns and pilasters, lintels and sill courses—white marble. Interior partitions—brick and terra cotta blocks, plastered and painted. Virginia Serpentine marble wainscot, Alberene Stone Co. Floor construction—reinforced concrete beams and floor slabs.

ROOF: Lead coated copper. Wings—composition with slag.

SOUND INSULATION: Acoustical plaster in vaulted ceiling of large clubroom.

WINDOWS: Wood casements. Glass—quality A, double strength.

FLOORS: Flagstone throughout, except asphalt tile in locker rooms.

WOODWORK: Clubroom—blue stone door and window trim. Interior doors—flush, painted. Exterior—wood painted.

HARDWARE: Interior—brass, ship finish. Exterior—galvanized iron painted butts; locks and handles—brass.

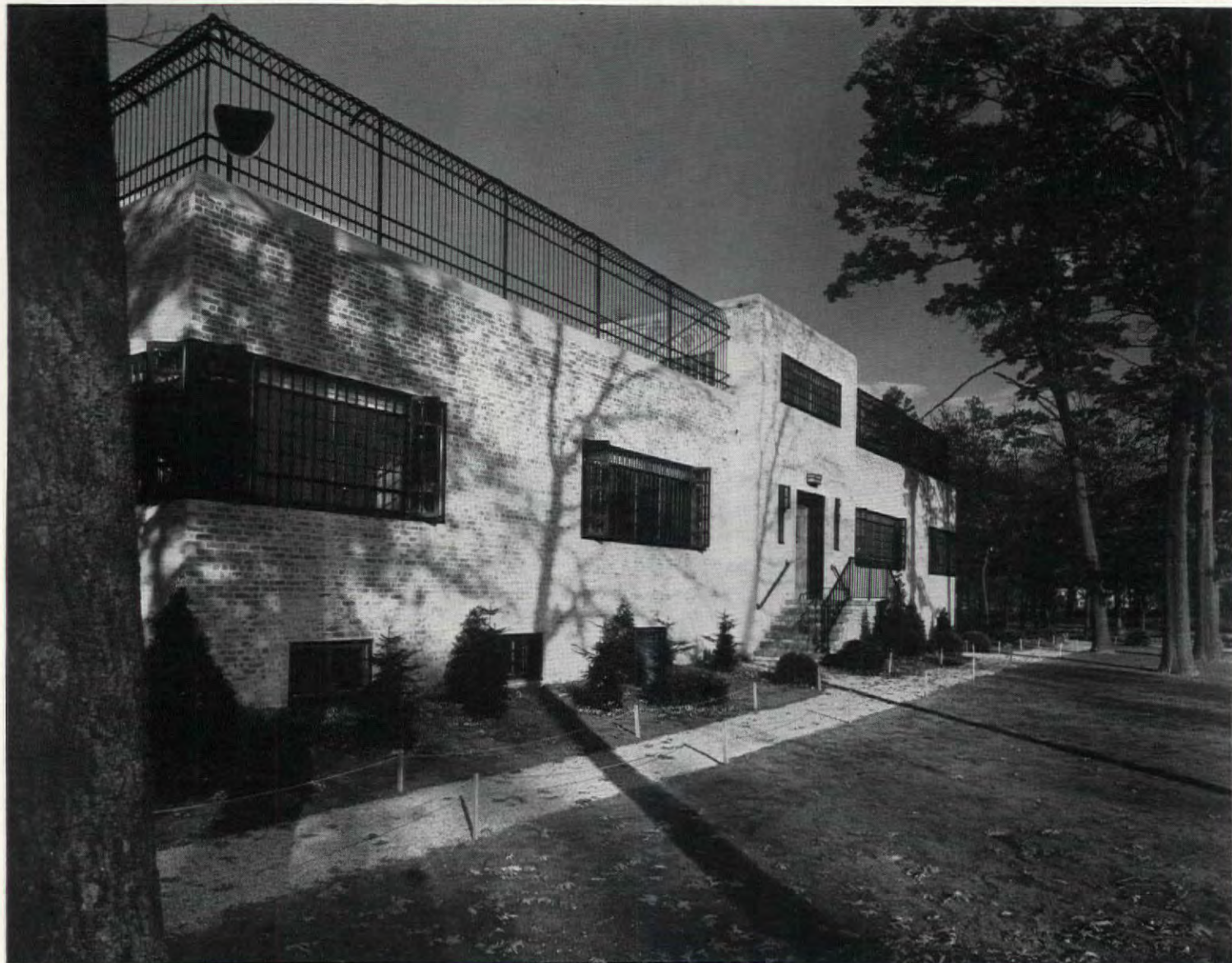
ORNAMENTAL IRON: Cast iron railing on wings, Williams Iron Works, Inc. Stainless steel on interior, Arkay Co.

ELECTRICAL INSTALLATION: Wiring system—rigid conduit, controlled from panel board.

PLUMBING: Pipes: Soil—extra heavy cast iron. Water—brass.

HEATING: Direct radiation, oil burner, convactor type radiators.

RECREATION HALL FOR THE LONG ISLAND HOME, LTD., AMITYVILLE, N. Y.



Robert M. Damora Photos

Part of an establishment for the care of mental cases, the recreation center illustrated was designed to meet a number of special requirements. Complete supervision of the patients had to be combined with as little of the institutional atmosphere as possible. Some thirty rooms were required, including a library, sewing room, shops for weaving, wood, and metal work, a hydrotherapy department and a gymnasium. It was further required that rooms be grouped so that one attendant could watch four or five. All interior and exterior doors are locked, and windows and roof terraces are barred or so designed that they cannot be used as exits. Interiors are domestic in character, with colored walls, pine paneling, linoleum and terrazzo floors, and informal furniture. The plan provides for expansion at the rear. The building cost 60 cents a cubic foot.



GYMNASIUM



BASEMENT

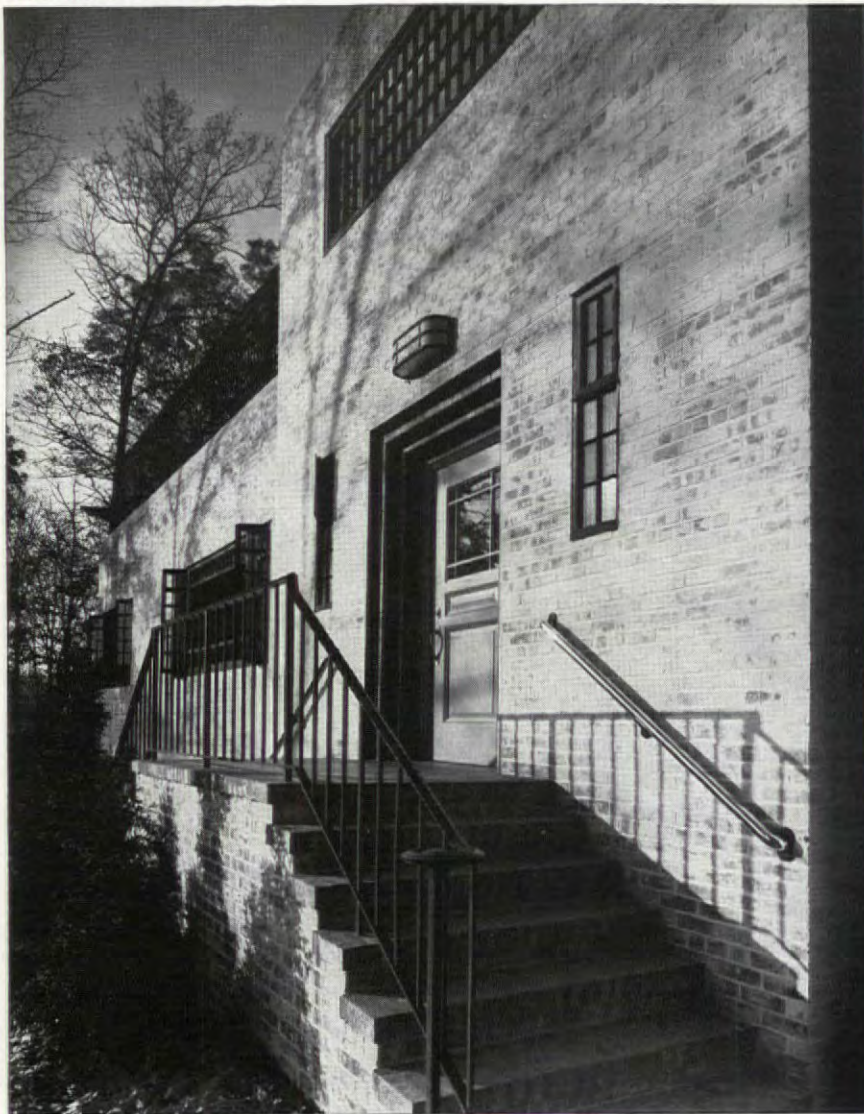


FIRST FLOOR



SEWING AND WEAVING ROOMS

ENTRANCE DETAIL



CONSTRUCTION OUTLINE

FOUNDATION

Footings and walls—reinforced concrete. Waterproofing—all concrete walls and basement floor damp-proofed, Toch Bros. Membrane system of waterproofing under entire floor.

STRUCTURE

Exterior walls—4 in. common red brick backed up with Natco hollow tile, National Fireproofing Co., finished 1 in. Artstone, Artstone Rocror Corp., 2 in. glazed tile. Interior partitions—hollow tile, either plaster or wood paneled or built up of 4 in. and 6 in. hollow glazed Vitritile, National Fireproofing Co. Structural steel for columns, spandrels, floor beams and roof trusses.

FLOOR CONSTRUCTION

Republic Steel Corp. 8 in., 2-way reinforced concrete on main floor. Reinforced concrete flat slabs on roof. Slab exposed except Acousti-Celotex ceiling, Celotex Corp., in basement over bowling alley and panels of removable Formica, Formica Insulation Co., with chromium plated joint strips in men's locker room.

ROOF

Steel purlins, 2 in. gypsteel planks, 30 lbs. tar felt and raised seam copper roof, Chase Brass & Copper Co. over gymnasium. Decks—Barrett Co.'s 5-yr. guarantee built-up roofing covered with domestic promenade tile.

SHEET METAL WORK

Flashing—16 oz. copper.

INSULATION

Roof over gymnasium— $\frac{1}{2}$ in. rockwall board, U. S. Gypsum Co.

WINDOWS

Sash—casement institutional safety windows, Richey-Browne-Donalds. Glass—quality A, double strength, Libbey-Owens-Ford Glass Co. Returning corner gymnasium windows—12 x 12 in. Insulux glass bricks. Owens-Illinois Glass Co.

FLOORS AND COVERINGS

Billiard room and ladies' lounge—Accotile, Armstrong Cork Products Co. Corridors, foyers, stairways, toilets, hydrotherapy room, shower and toilet—terrazzo. Dark room—cement finish, acid resisting. Medical and occupational rooms, library, etc.—linoleum covered. Gymnasium—Carter Blox-on-end wood flooring.

WALL COVERINGS

Occupational rooms and library—stained knotty pine paneling. Gymnasium—Belden Stark brick 8 ft. high. Artstone Rocror Corp. plaster above.

WOODWORK AND TRIM

Interior doors—flushwood, Morgan Sash & Door Co., metal door bucks. Exterior doors—white pine, paneled and glazed. Stage doors in gymnasium—movable, folding, Circle A canvas covered, Newcastle Products Inc.

HARDWARE

All hardware by P. & F. Corbin.

PAINTING

Interior: Ceilings in gymnasium and bowling alley and sash—paint, Millers Paint Store. Exterior: Walls—whitewashed.

ELECTRICAL INSTALLATION

Switches—Hart & Hegeman and Pass & Seymour. Fixtures—four lens Holophane units, Holophane Co., in gymnasium; remainder by Emil Ammann, Inc. Special equipment—sound reproducing system, radio receiver, phonograph, amplifying and control panel, R.C.A. system.

PLUMBING

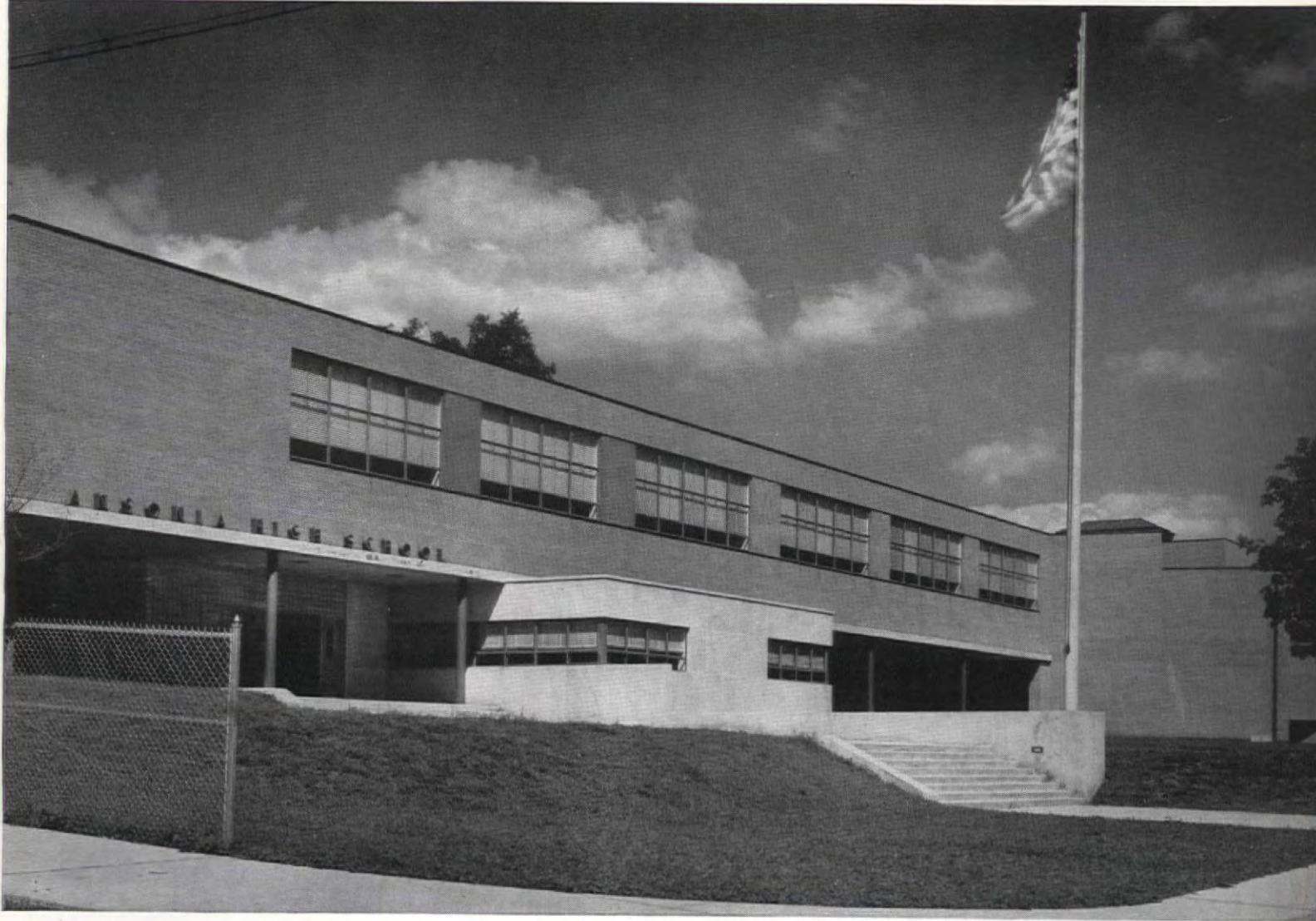
All fixtures by Standard Sanitary Mfg. Co.; one Halsey-Taylor Co. drinking fountain, Powers Regulator Co. anti-scalding shower controls, Speakman Co. shower heads. Pipes: Soil—cast iron. Water supply—copper brass. Hot water tank—500 gallon, copper tube steam heat type, Patterson-Kelly Co., Inc.

HEATING

Vacuum steam system; high pressure steam from plant outside, reduced to low pressure, Automatic Johnson Control system, Johnson Service Corp. Radiators—Crane Co. Valves—Barnes & Jones, Inc. Thermostats—Johnson pneumatic control system, Johnson Service Corp.

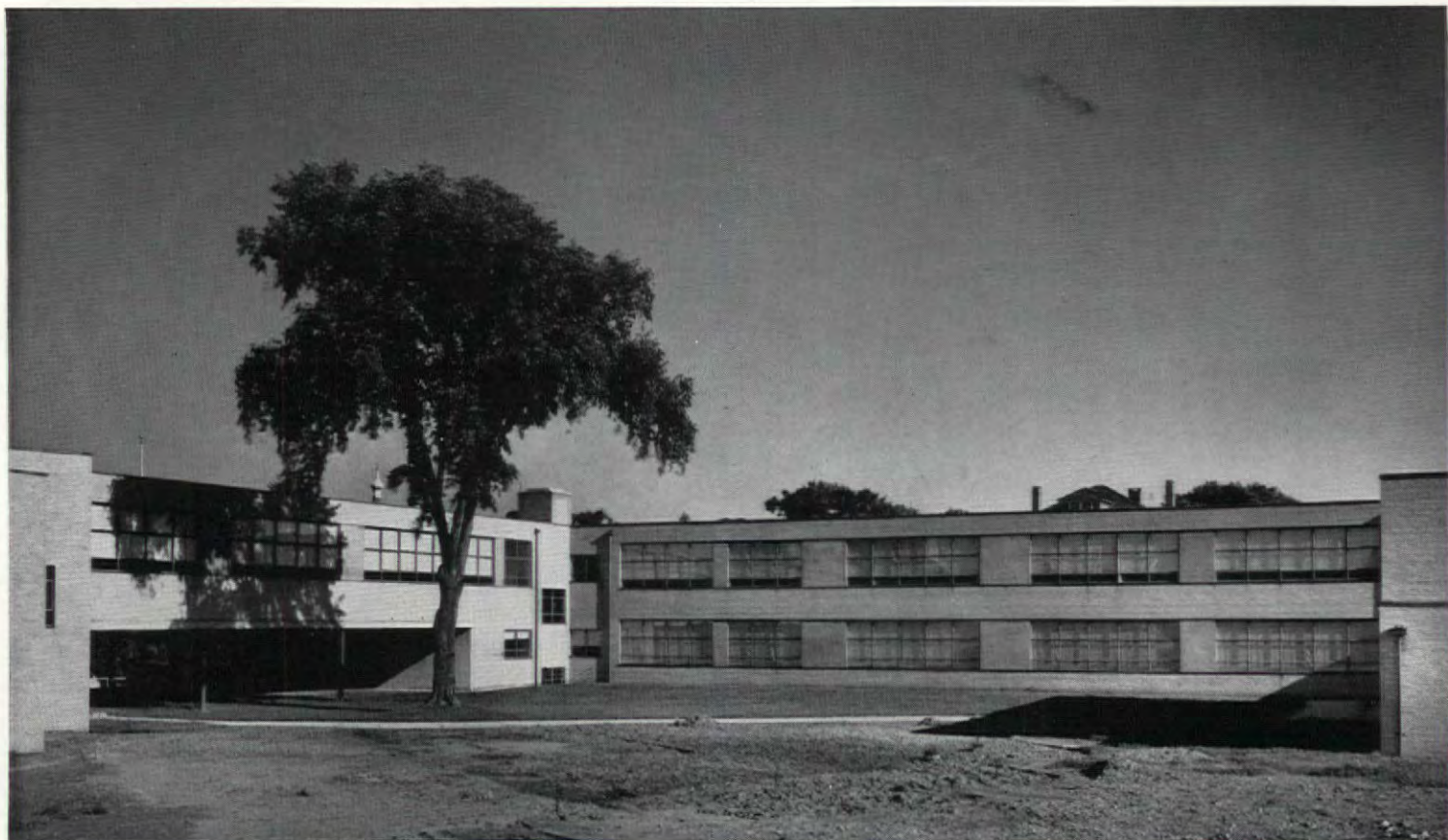
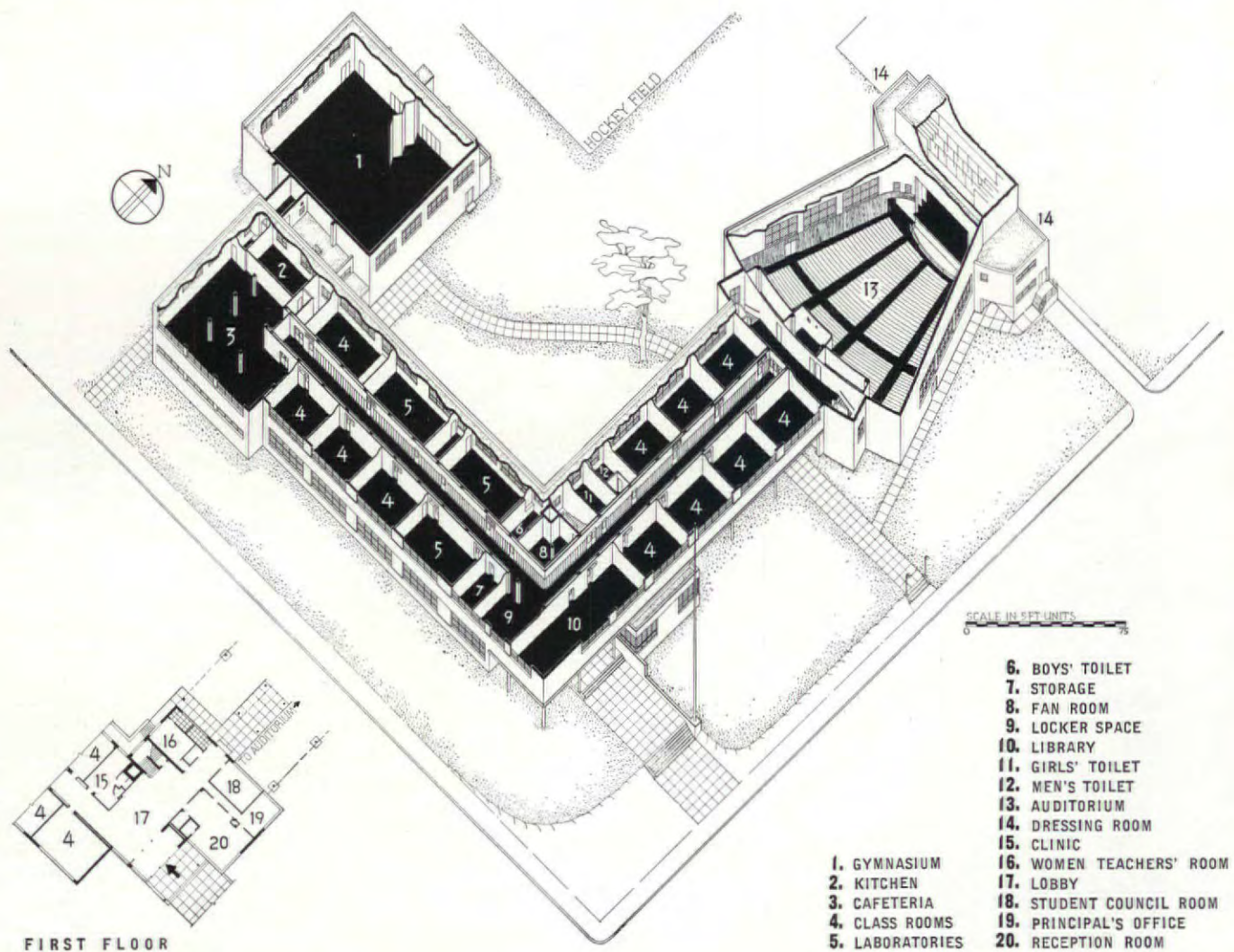
SCHOOLS

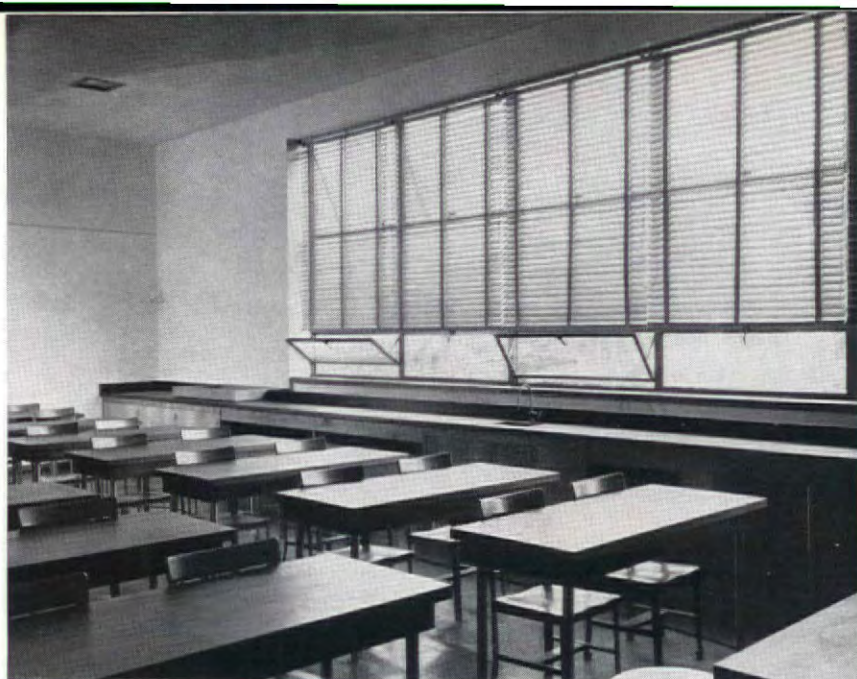
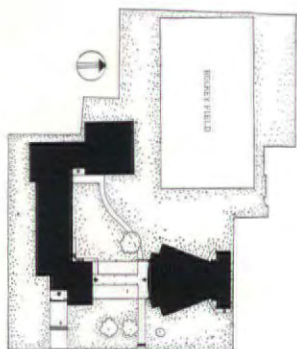
Nyholm Photos



ANSONIA HIGH SCHOOL, ANSONIA, CONN.

WILLIAM LESCAZE, ARCHITECT
VERNON F. SEARS, ASSOCIATE





BIOLOGY LABORATORY



BIOLOGY LABORATORY



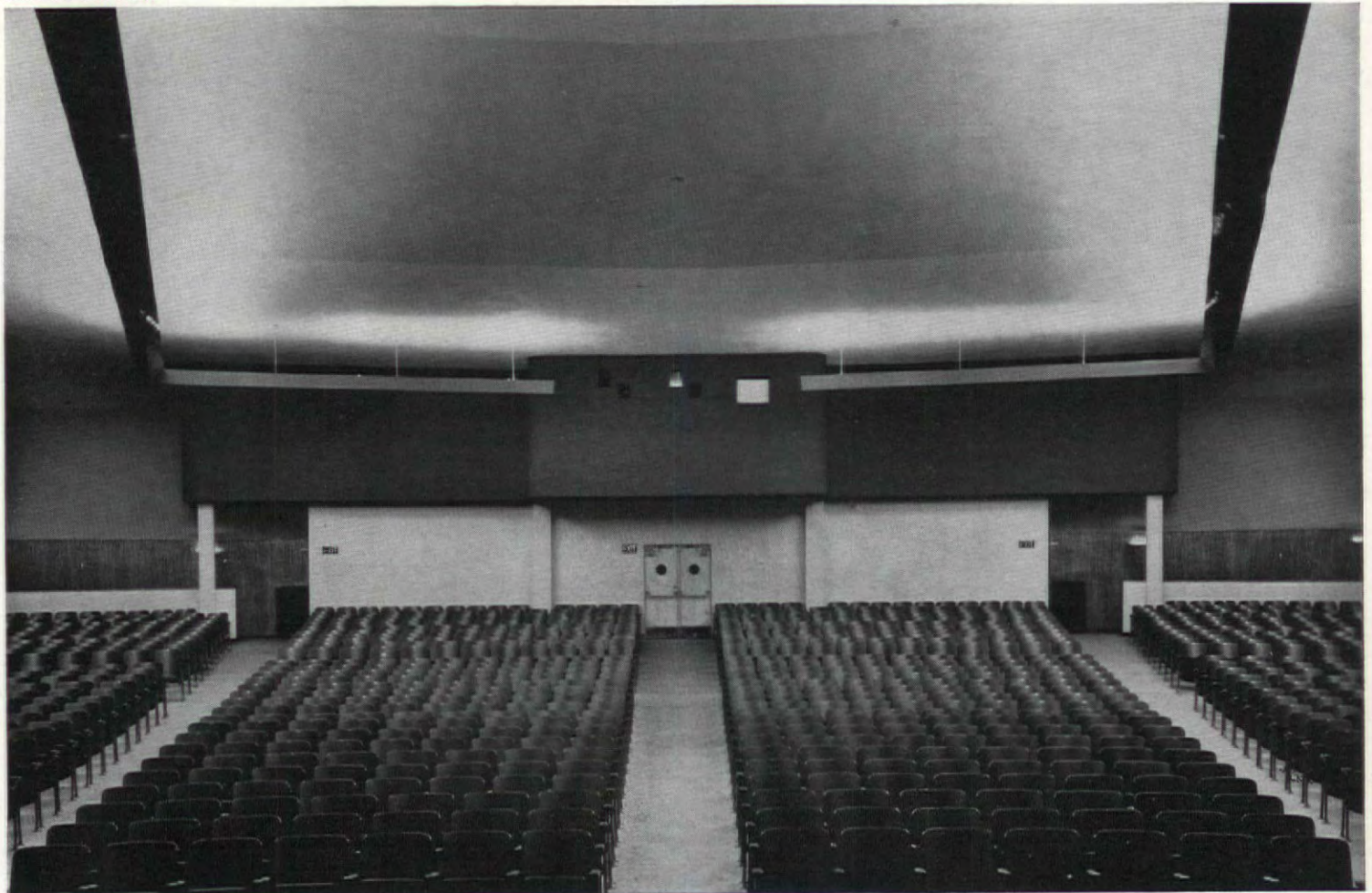
LABORATORY

The steady progress of modern architecture has been sharply accented by a number of new school buildings erected during the past year, of which this is a notable example, a most impressive indication of what is possible when the architect is free to concentrate on his problem unhampered by the traditional approach. The school consists of three loosely knit elements: classrooms, auditorium, and gymnasium. Each unit is clearly articulated, the mass and fenestration indicating the function of each. Because the auditorium is used by the public as well as students, it was located near the street and given a separate entrance; there was no attempt to force auditorium and gymnasium into an artificially symmetrical composition. Because classrooms are fairly standardized elements, they were so expressed on the exterior; there are no niches, columns, bay windows or any of the "focal points" introduced by the designer who is afraid of plain walls. Second floor rooms have direct access to the auditorium; due to the arena-type section used, students can pass down to the orchestra level with a minimum of inconvenience. Logically conceived in plan and vigorously expressed in elevation, the building is a powerfully rhythmic composition, refreshing in its directness, stimulating in its quality of light and openness. If this is modern architecture, U.S. school children, their teachers and the whole community have everything to gain by its general adoption.



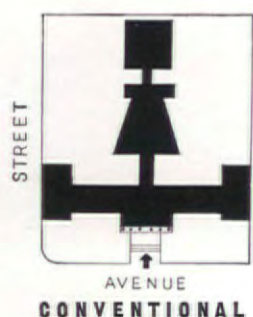
STAGE

AUDITORIUM





ENTRANCE



CONVENTIONAL



MODERN

Above are two diagrammatic plan studies made by the architect, one conventional, and one modern. The relative merits of each were summed up as follows:

CONVENTIONAL. "Bad circulation: poor access to gymnasium and auditorium. Insufficient ground space left for athletics. Entrance in center forces false use of interior; no clear placing of administrative offices. Symmetrical facade on the avenue, but at what sacrifice of the amenities!"

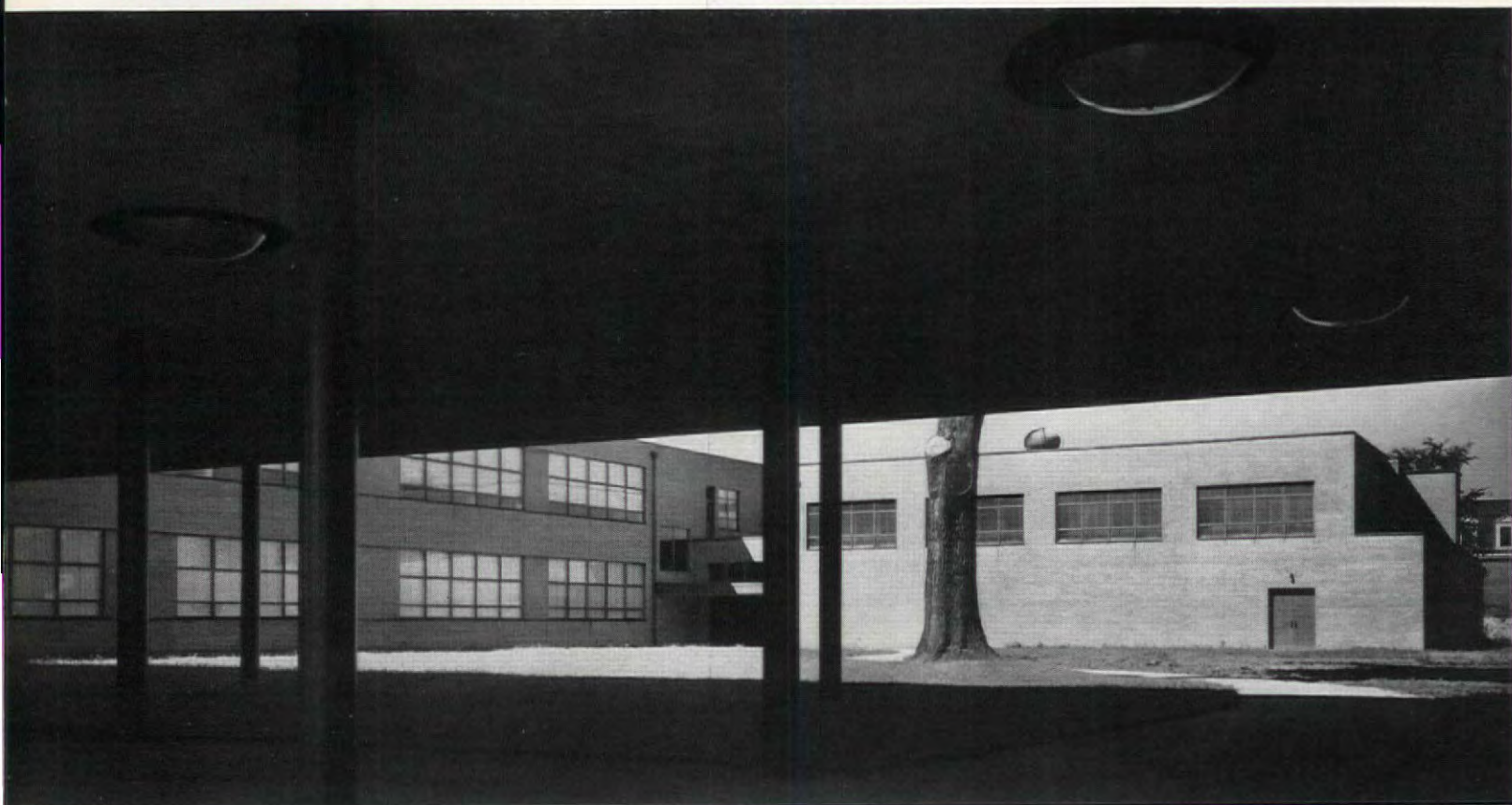
MODERN. "Large open field for athletics. Auditorium easy of access for community. Open porch between auditorium and administrative offices, classrooms above."



LOCKERS



ENTRANCE TO AUDITORIUM



TOWARD GYMNASIUM

CONSTRUCTION OUTLINE

FOUNDATIONS

Footings and walls—concrete. Waterproofing—membrane.

STRUCTURE

Exterior walls—salmon colored, selected local, common brick; hollow back tile, National Fireproofing Co., Toch Bros. R. I. W. waterproofing, wood furring, Reynolds Corp. Ecod-Fabric paper back lath. Interior partitions—hollow tile, Keene cement plaster, Best Bros. Keene's Cement Co., gypsum block and hard white plaster. Columns—steel; exterior visible columns—lally, Lally Column Co. Structural steel—Bethlehem Steel Co. Floor construction: First—concrete slab on cinder base on ground. Second—concrete pan construction. Ceiling—metal lath, acoustical plaster, California Stucco Co. Auditorium ceiling: center portion—hard white plaster; balance and rear wall—acoustical plaster.

ROOF

Construction—wood, sheathing, 20-yr. Bonded Barrett roofing, Barrett Co.; over stage and dressing rooms—gypsum plank.

SHEET METAL WORK

Flashing and gutters—Anaconda copper,

American Brass Co. Ducts—galvanized iron.

INSULATION

Walls—Ecod lath, Reynolds Corp. Roofs—1 in. Celotex, Celotex Co.

WINDOWS

Sash—architectural projected, Hope's Windows, Inc. Glass—quality B, Pittsburgh Plate Glass Co. Glass brick—Libbey-Owens-Ford Glass Co.

STAIRS

Frame and risers—metal. Treads—concrete with alundum chips.

FLOORS

Lobby—terrazzo on concrete slab. Classrooms and corridors—asphalt tile on concrete, W. J. Duffy Co. Shower rooms and auditorium—cement finish. Stage—maple, Storm Flooring Co. Gymnasium—maple flooring on cork cushion, set in mastic.

WALL COVERINGS

Auditorium—Flexwood wainscoting, U. S. Plywood Co. Classrooms—hard white plaster. Gymnasium—smooth face tile, National Fireproofing Co.

WOODWORK

Trim—birch. Interior and exterior doors—

Rezo flush doors, The Paine Lumber Co., Ltd.

HARDWARE

Interior and exterior—P. & F. Corbin

PAINTING

Interior: Walls and ceilings—natural. Floors—cement. Trim—stain. Sash—painted gray.

ELECTRICAL INSTALLATION

Wiring system—rigid conduit. Classroom fixtures—Holophane Co.; all special fixtures—Cecil K. White, Inc.

PLUMBING

Fixtures—General Ceramics Co. Water pipes—Anaconda copper tube, American Brass Co.

HEATING AND AIR CONDITIONING

Heating—low pressure steam. Boiler—Pacific, U. S. Radiator Co. Fuel—oil, grade No. 6, electric preheater gas pilot. Radiators and valves—Arco, American Radiator Co. Regulators—Johnson Service Co.

SPECIAL EQUIPMENT

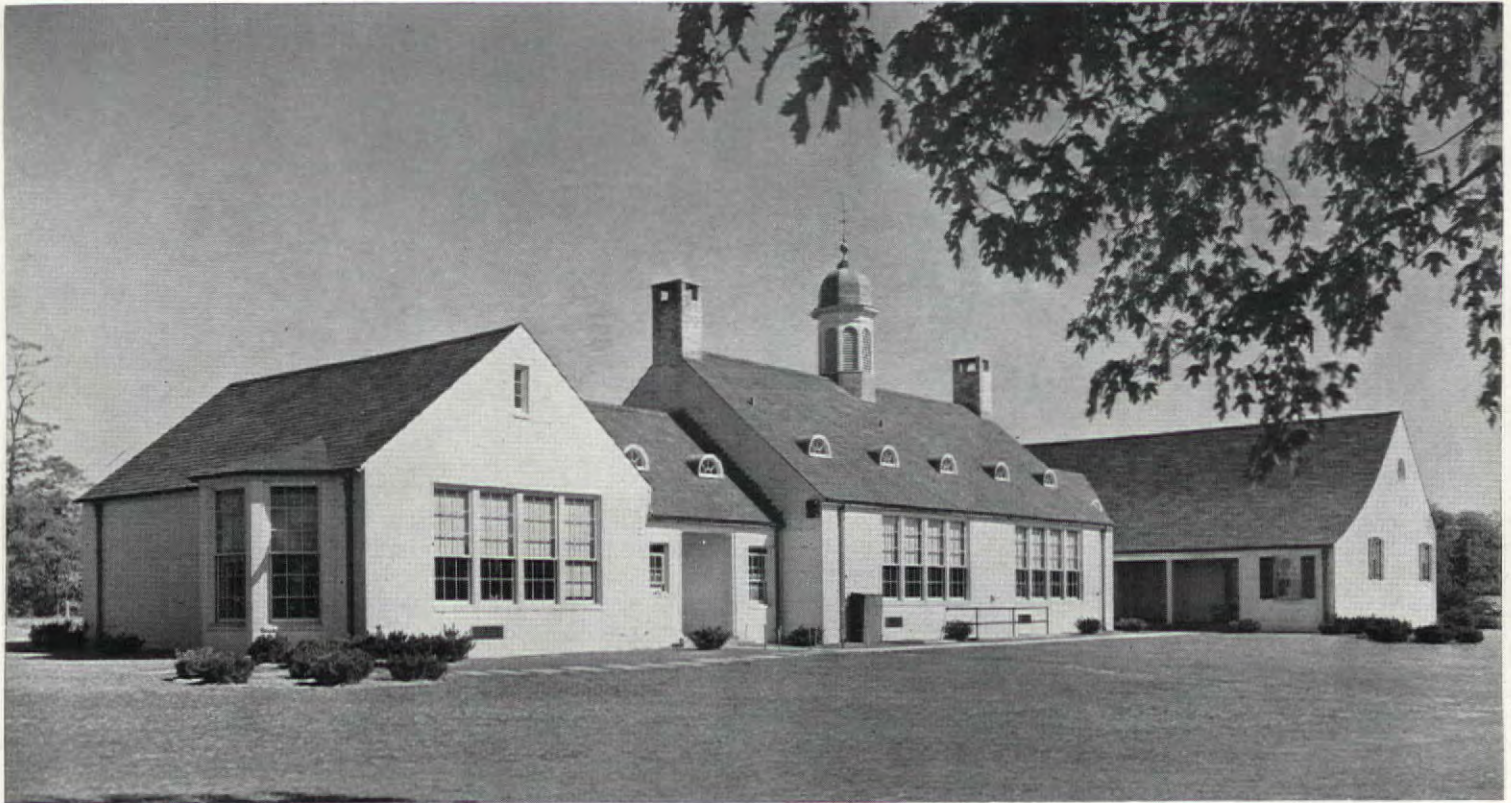
Radio Outlets—Stromberg-Carlson Co. Venetian blinds—Ray Nichols, Inc. Stage equipment—I. Weiss & Son, Inc. Laboratory equipment—L. F. Dettenborn W. W. Co. Furniture—Heywood-Wakefield Co. Lockers—Berger Mfg. Co. Fence—American Steel & Wire Co.

SCHOOL IN LLOYD HARBOR, TOWN OF HUNTINGTON, LONG ISLAND, N. Y.



Samuel H. Gottscho Photos

EDWARD SHEPARD HEWITT, ARCHITECT



KINDERGARTEN



CONSTRUCTION OUTLINE

A small grade school, designed for a suburban community. The suggestion of domestic scale was indicated by the character of the surroundings, and was made possible by the comparatively small space requirements of the building. The manner in which the functional requirements of the building, such as large classroom windows, were solved without destroying the desired scale, is most ingenious. Future additions are contemplated, and will consist of a gymnasium back of the auditorium, and new classrooms added to the existing wing.

FOUNDATIONS: Footings and walls—Portland cement, 1:2:4 mix. Waterproofing—2 coats Barrett's XC plaster on all interior brickwork and 1-ply waterproofing fabric, Barrett Co.

STRUCTURE: Exterior walls—brick. Interior partitions—terra cotta and gypsum blocks. Floor construction—4 in. cinder concrete arches and 2 in. fill.

ROOF: Slate, Bangor Slate Assn., No. 1 ribbon variable width and graduated exposure on asphalt saturated felt and $\frac{3}{8}$ in. sheathing.

SHEET METAL WORK: Flashing—16 oz. soft copper. Gutters—16 oz. hard, lead coated.

INSULATION: First floor ceiling—rock wool, Johns-Manville, Inc. Sound insulation—acoustical plaster on walls and ceiling of auditorium and stage, Sabinite, U. S. Gypsum Co.

WINDOWS: Sash—wood, double hung. Glass—double strength.

FLOOR COVERINGS: Wash rooms—non-slip tile; remainder Johns-Manville, Inc. asphalt tile.

WALL COVERINGS: Toilet rooms—cement

above wainscot, Best Bros. Keene's Cement Co., white glazed tile base.

WOODWORK: Interior doors—veneered stiles and rails; panels plain and laminated, 3-ply. Exterior doors— $\frac{3}{8}$ in. veneer applied to core of $\frac{3}{8}$ in. strips, put together with waterproof glue, panels raised and laminated 5-ply.

PAINTING: Interior: Walls, ceilings, trim and sash—white lead, linseed oil, pigments ground in oil, putty, whitening and white lead. Exterior: Walls—brick, 2 coats Bay State brick and cement coating, Wadsworth, Howland & Co., Inc.

ELECTRICAL INSTALLATION: Wiring—BX. Special equipment—signal and fire alarm systems, Edwards & Co., Inc.

PLUMBING: All fixtures by Crane Co. Pipes: Soil—cast iron. Water—brass.

HEATING AND AIR CONDITIONING: Low pressure gravity steam heating; fuel oil fired boiler; fan in auditorium. Pneumatic system and automatic heat regulation, Johnson Service Co.

HOUSING

WILLIAMSBURG HOUSES, BROOKLYN, N. Y.



Fairchild Aerial Surveys

ASSOCIATED ARCHITECTS: RICHMOND H. SHREVE, CHIEF; MATTHEW W. DEL GAUDIO, GURNEY AND CLAVAN, ARTHUR C. HOLDEN, HOLMGREN, VOLZ AND GARDSTEIN, JOHN W. INGLE, JR., WILLIAM LESCAZE, PAUL TRAPANI, HARRY LESLIE WALKER.

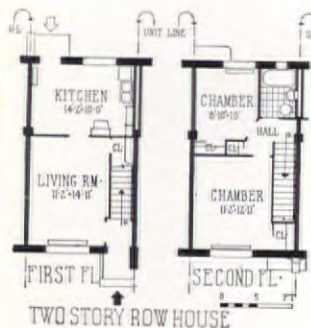
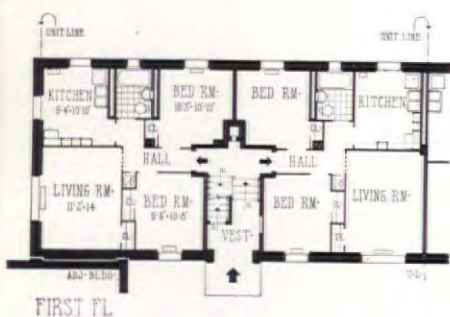
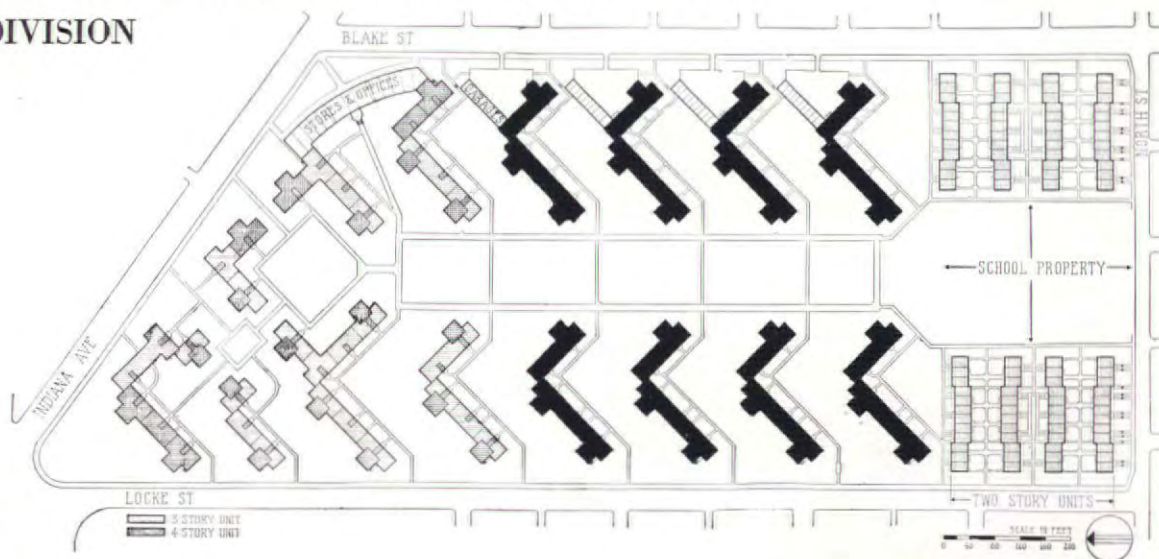
HOUSING LOCKEFIELD GARDEN APARTMENTS, INDIANAPOLIS, IND.



PWA Photos

For the first time in its history, the U.S. can point to a visible amount of government-sponsored housing, built and being lived in. Quantitatively negligible, it is nevertheless a beginning: 51 PWA projects housing 22,000 families at a rental averaging \$6 per room per month. Four of these projects are shown here, of which the largest, Williamsburg Houses, is illustrated on page 495. Williamsburg cost thirteen and a half millions, wiped out twelve of Brooklyn's several thousand slum blocks, will shortly take in 1,622 families of the 20,000 which applied for apartments. The Lockefield Garden Apartments in Indianapolis cover 18 per cent of a 22-acre plot, and demonstrate in three dimensions the validity of the contention that air, light, trees, and play areas are as tangible a part of housing as the space enclosed for rooms. The development consists of three- and four-story apartment buildings, and two-story row houses. Rentals are as follows: three rooms, \$22.80 and \$25.45; four rooms, \$26.54 and \$27.60, these figures including heat, hot water, electricity for refrigeration, cooking, and lights.

WILLIAM EARL RUSS AND MERRITT HARRISON, ARCHITECTS
P.W.A. HOUSING DIVISION



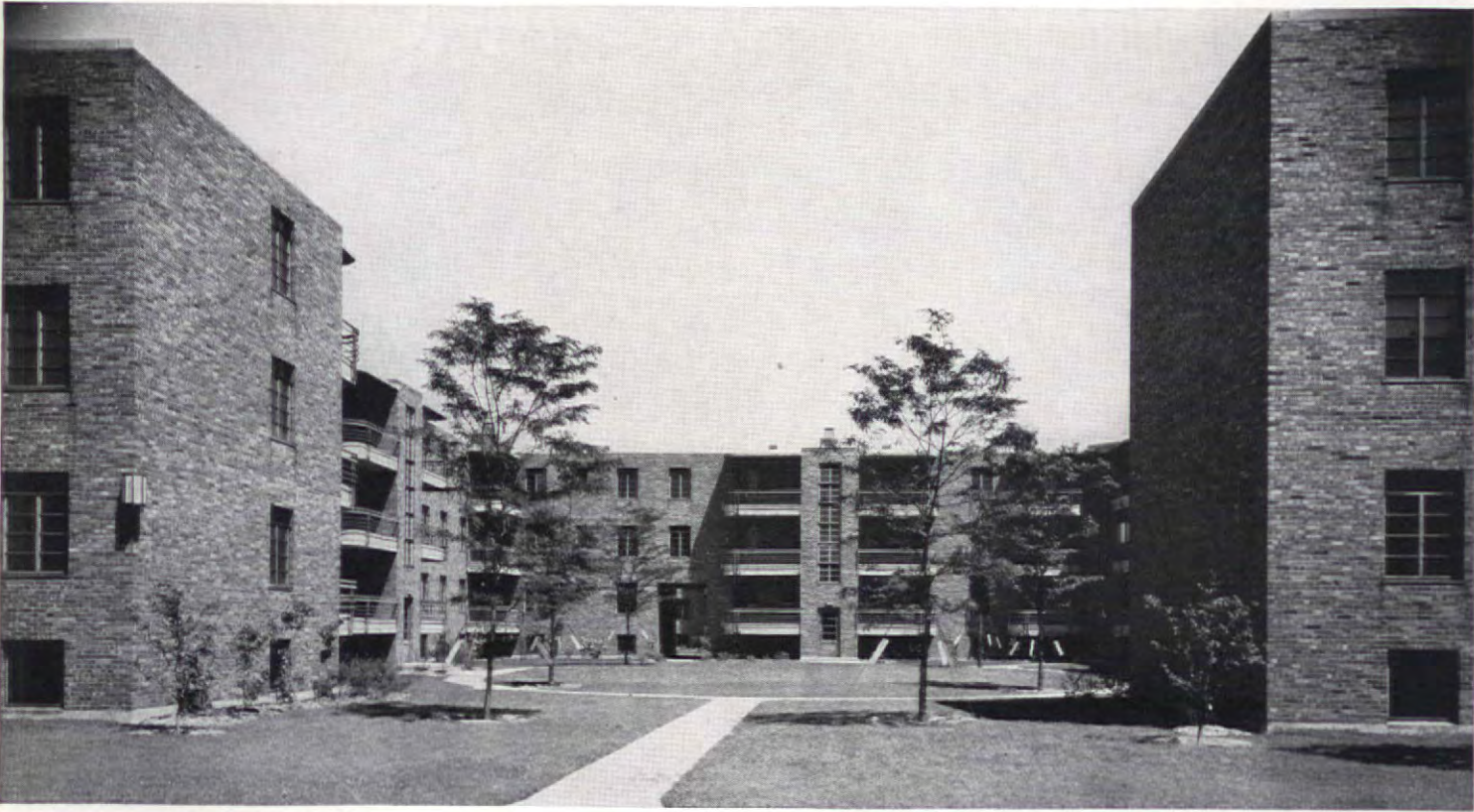
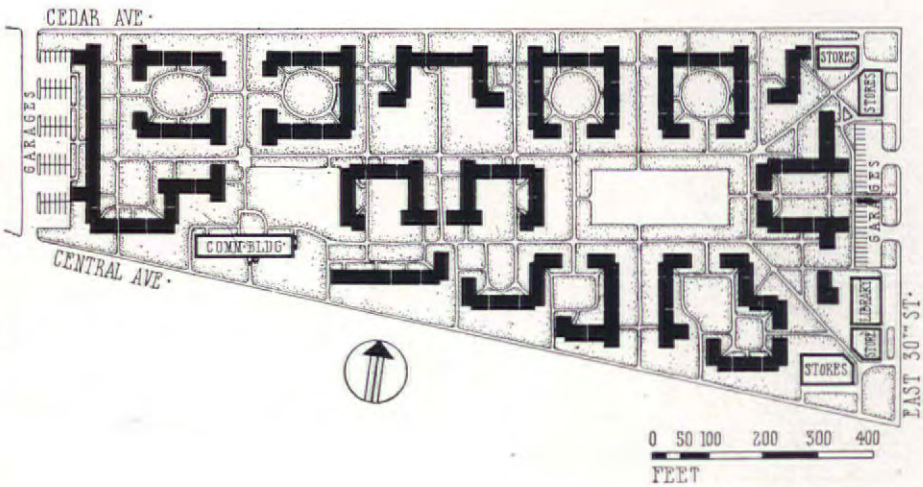


PWA Photos

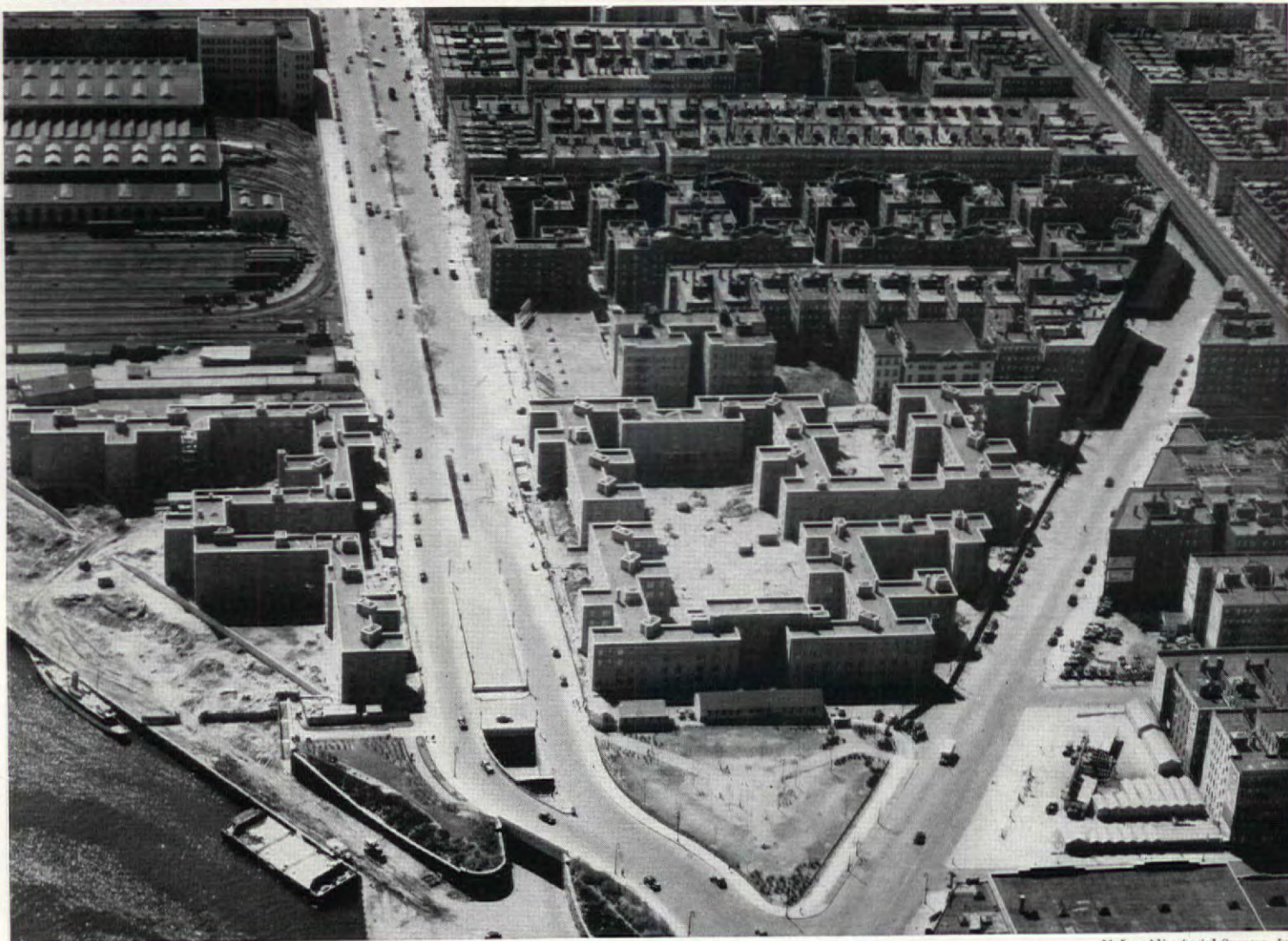
Eleventh of the PWA projects to be completed is the Cedar Central development, with 650 apartments available for rent. Like the others, it has a moderately low land coverage, is landscaped to relieve the somewhat austere lines of the buildings, and is constructed and designed to meet the strict PWA standards of quality. Apartments vary from three to five rooms, the main difference being in the number of bedrooms. Kitchens are equipped with electric refrigerators and gas ranges, heat and hot water are supplied from a central plant, and communal services include well-equipped laundries and storage rooms for baby carriages and bicycles. Rents are substantially the same as in other projects: from \$18.44 for a three-room apartment to \$22.63 for five rooms. Electricity, gas, and heat are charged for separately, and collected as part of the rent.



FIRST FL.
TYPICAL FLOOR PLAN

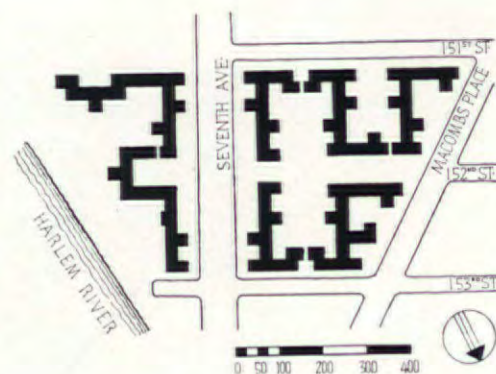


HOUSING HARLEM RIVER HOUSES, BRONX, NEW YORK



McLaughlin Aerial Surveys, Inc.

Harlem River Houses differs from other PWA projects in two important respects: it is not a slum-clearance project, and it is operated by the New York City Housing Authority under a unique one-year lease from the Government, frankly experimental in nature. The property was largely vacant land, and was under consideration for use as a park when it was taken over by the Government. The lease was designed to test the feasibility of operating PWA housing projects under municipal authorities. Three steps in the development of housing practice in New York are shown in the air view above: two blocks above the Harlem River project, with its relatively low land coverage, are the famed Rockefeller-financed Dunbar Apartments for Negroes; in the background are the characteristic rows of congested tenements which furnish the bulk of the city's housing accommodations. Five hundred and seventy-four families occupy the new development, at rentals varying from \$6 to \$10 per room per month, depending on the size of the apartments.



P.W.A. HOUSING DIVISION ASSOCIATED ARCHITECTS: ARCHIBALD MANNING BROWN, CHIEF; WILL RICE AMON,
RICHARD W. BUCKLEY, FRANK J. FORSTER, CHARLES F. FULLER, HORACE GINSBERN, JOHN LOUIS WILSON



SEVENTH AVENUE

Frank Randt Photos

INTERIOR COURT



HARLEM RIVER HOUSES, BRONX, N. Y.

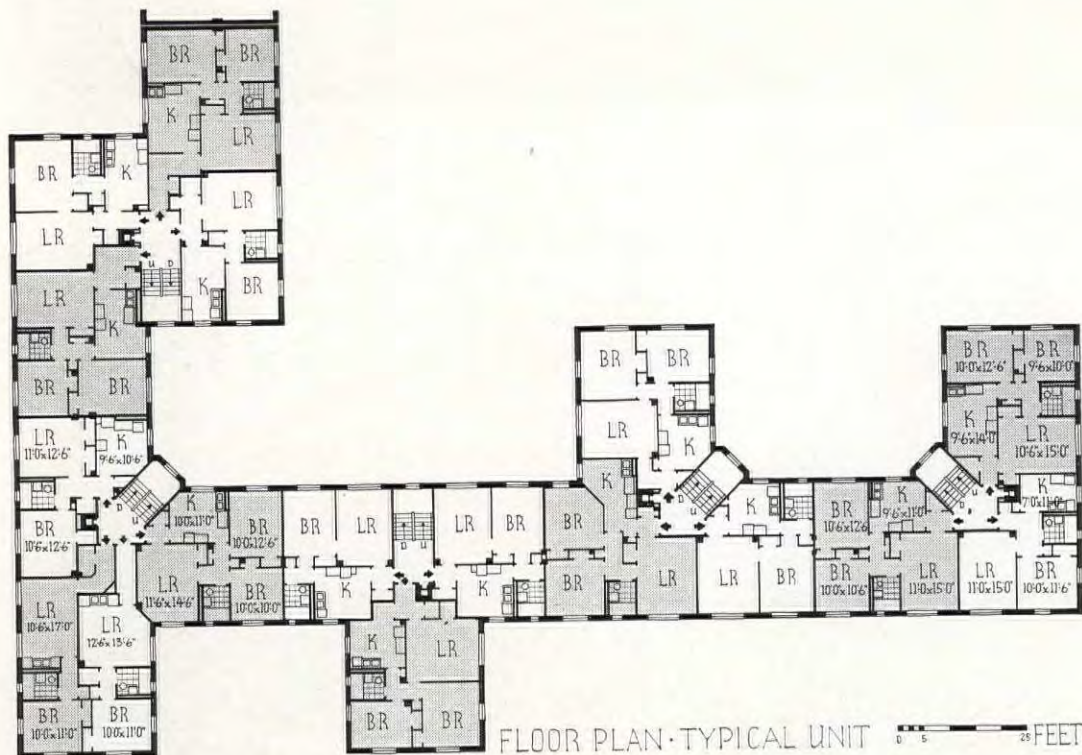


LIVING ROOM

Frank Randt Photos



KITCHEN



APARTMENTS

Robert M. Damore



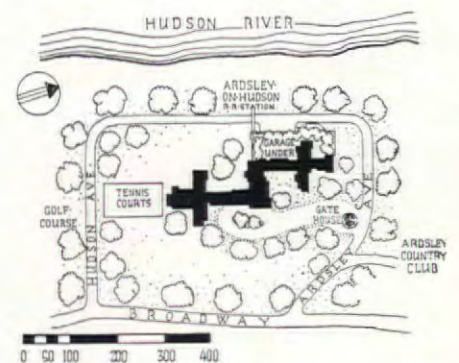
HUDSON HOUSE, ARDSLEY-ON-HUDSON, NEW YORK
SHREVE, LAMB AND HARMON, ARCHITECTS

HUDSON HOUSE, ARDSLEY-ON-HUDSON, N. Y.



Schnall

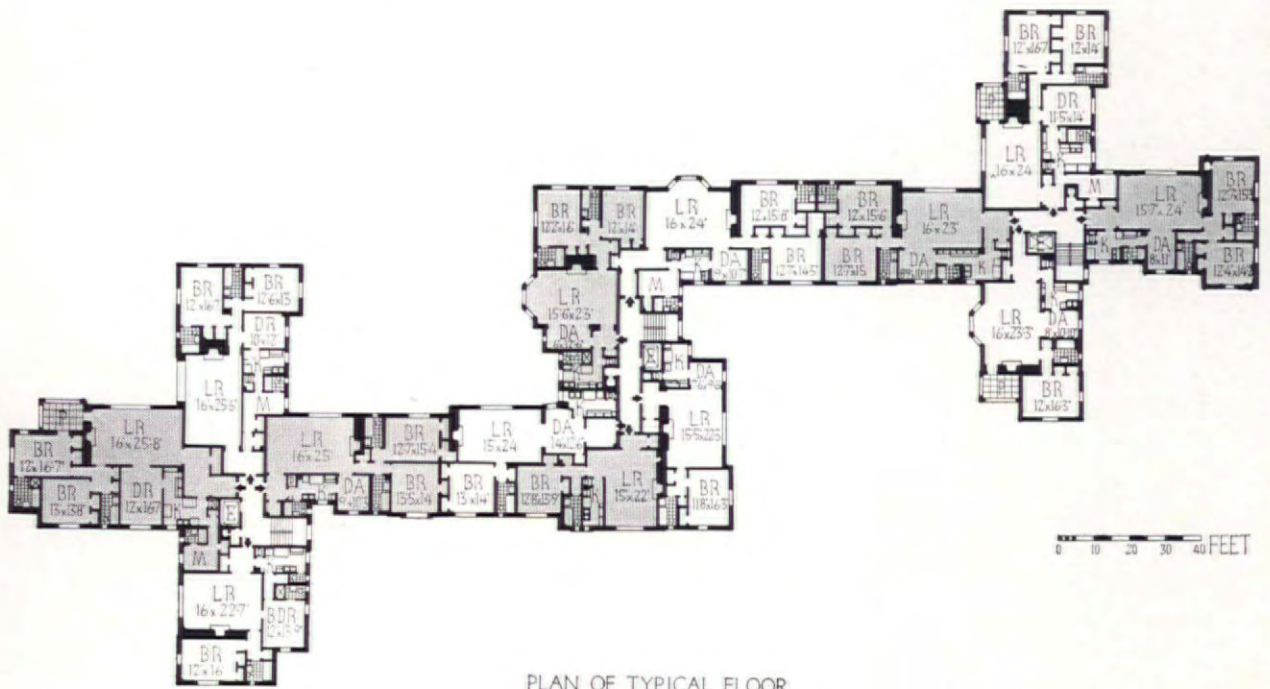
The traditional approach to the development of suburban residential property is the subdivision, with its individual houses and lots. Equally valid, and with a number of distinct advantages, is the concentration of living units in one large building, and the preservation of the rest of the property as a park. The site of this building is located in a suburban community within easy commuting distance of New York City, and was developed by a syndicate of Ardsley residents. Situated high above the Hudson River, the building has excellent views to the north, west, and south, and was designed to take advantage of them. It is also so located that its occupants can walk directly to the railroad station over a sheltered foot bridge. The building is broken up into three units, each with its own means of vertical circulation; cross-ventilation is provided by the plan, and a majority of the apartments face the view. Additional services for the tenants include a garage, a small restaurant, separate maids' rooms, a laundry, and storage rooms. In the face of the owners' insistence on an exterior of Tudor derivation the architects have managed an extraordinarily clean design.

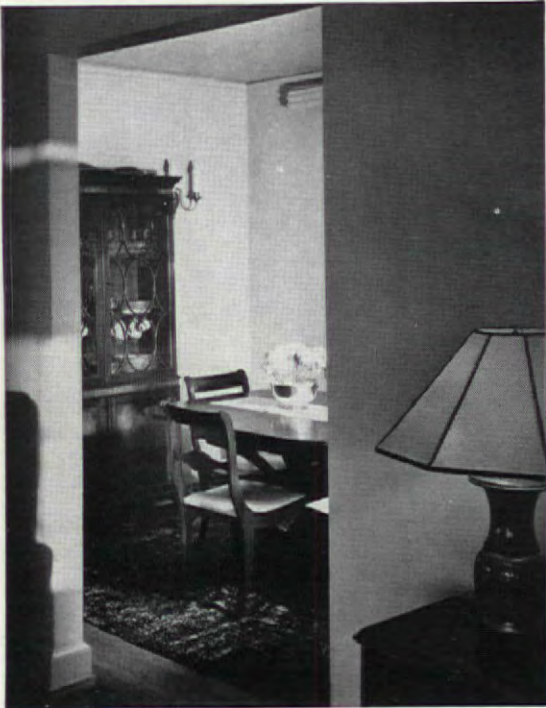




PORCH

Robert M. Damora





DINING ROOM



LIVING ROOM

Robert M. Damora Photos

CONSTRUCTION OUTLINE

FOUNDATIONS

Footings—reinforced concrete.

STRUCTURE

Exterior walls—brick throughout; garage—rubble stone. Interior partitions—hollow tile and gypsum block. Interior columns—structural steel. Floor construction—steel joists, precast gypsum plank, yellow pine sub-floor, oak finish flooring. Ceilings— $\frac{3}{8}$ in. ribbed lath and hard white plaster.

ROOF

Steel joists, Concrete Steel Co., gypsum plank, Structural Gypsum Co., rigid insulation, promenade tile over membrane waterproofing.

SHEET METAL WORK

Flashing—copper.

INSULATION

Roofs—rigid board, 1 in., Celotex Corp.

WINDOWS

Steel casement, Detroit Steel Products Co. Glass—quality A, double strength. Screens—steel frame, bronze mesh, Detroit Steel Products Co.

STAIRS AND ELEVATORS

Stairs—Standard steel construction, precast terrazzo treads.

Elevators—push button, selective and collective, Otis Elevator Co.

FLOORS

Baths—tile. Kitchen—asphalt tile over cement. Other rooms within apartments—oak. Elevator lobbies and corridors—terrazzo.

WOODWORK

Trim—steel. Entrance doors to apartments—hollow metal; inside—birch. Exterior doors—oak. Garage doors—wood, Kinnear Mfg. Co., Inc.

HARDWARE

Interior and exterior—P. & F. Corbin.

PAINTING

Interior: Walls and ceilings—lead and oil. Trim and sash—enamel.

ELECTRICAL INSTALLATION

Wiring system—Sheraduct, National Electrical Products Co.

Switches—Harvey-Hubbell, Inc. Fixtures—Cassidy Co.

PLUMBING

Fixtures—Kohler Co. Pipes: Soil and vents—extra heavy cast iron, (less than 3 in.) standard weight galvanized wrought iron.

Water supply—brass. Hot water heater—Patterson-Kelly Co.

Laundry equipment—Wallace B. Hart.

HEATING

Low pressure steam, vacuum system. Boiler—Fitzgibbon Boiler Co.

Oil burner—Ray Oil Burner Co. Radiators—concealed, American Radiator Co.

Valves—Walworth Co. Radiator valves and traps—Warren Webster & Co.

SPECIAL EQUIPMENT

Incinerators—Kerner Incinerator Co. Venetian blinds—Resco

Venetian Blind Corp. Kitchen Cabinets—Oxford Cabinet Co.

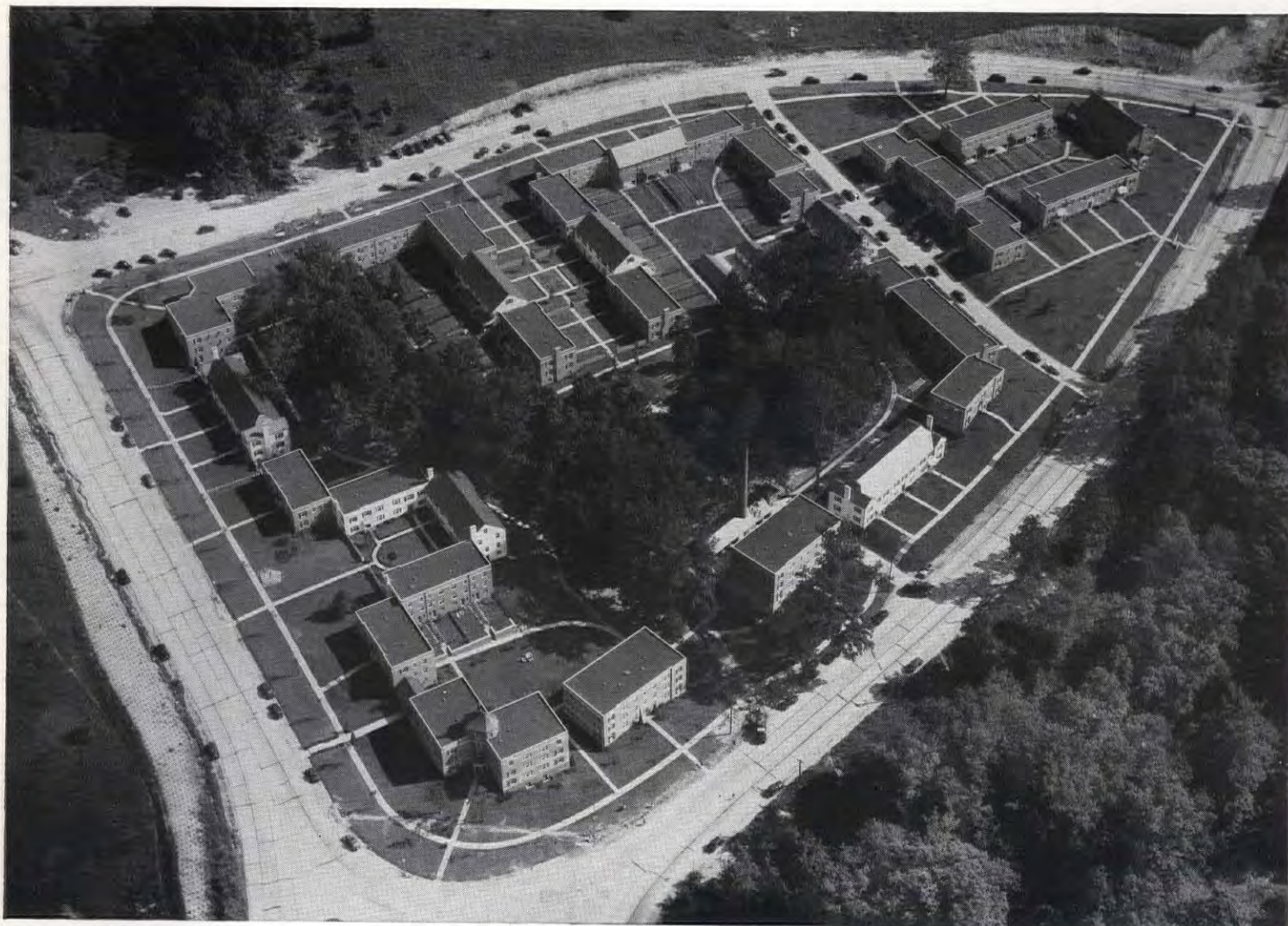
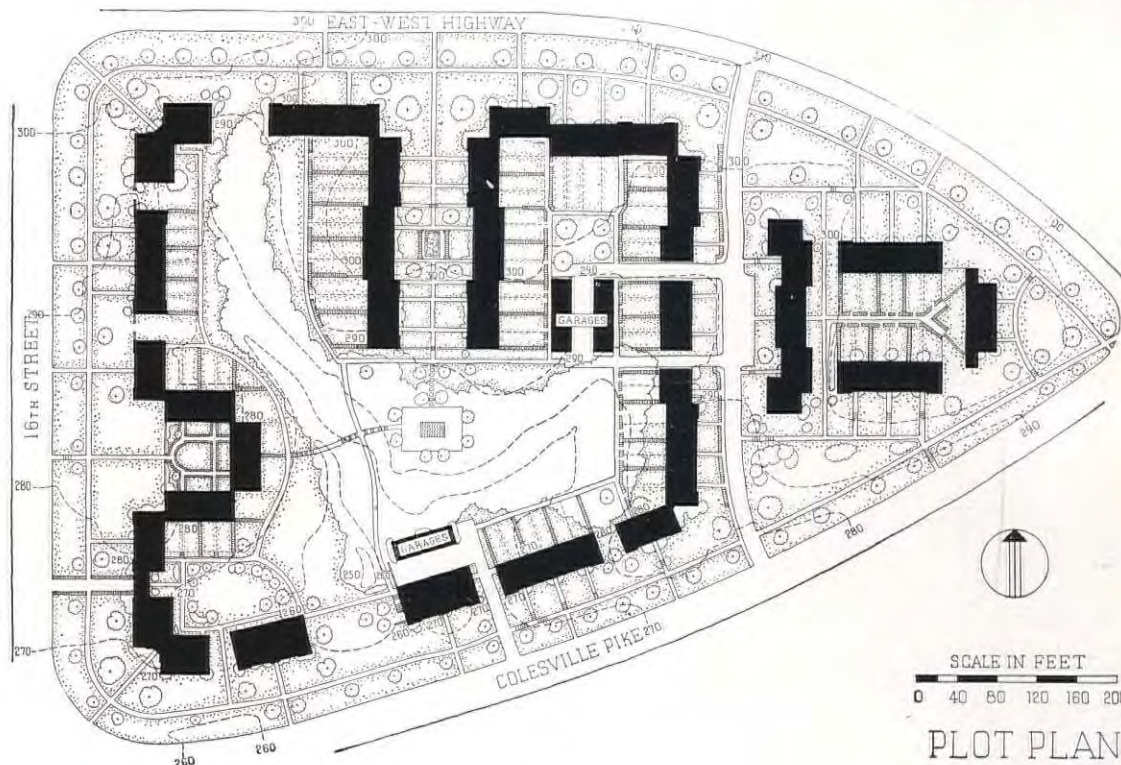
Medicine cabinets and towel hampers—United Metal Box Co.

KITCHEN



APARTMENTS

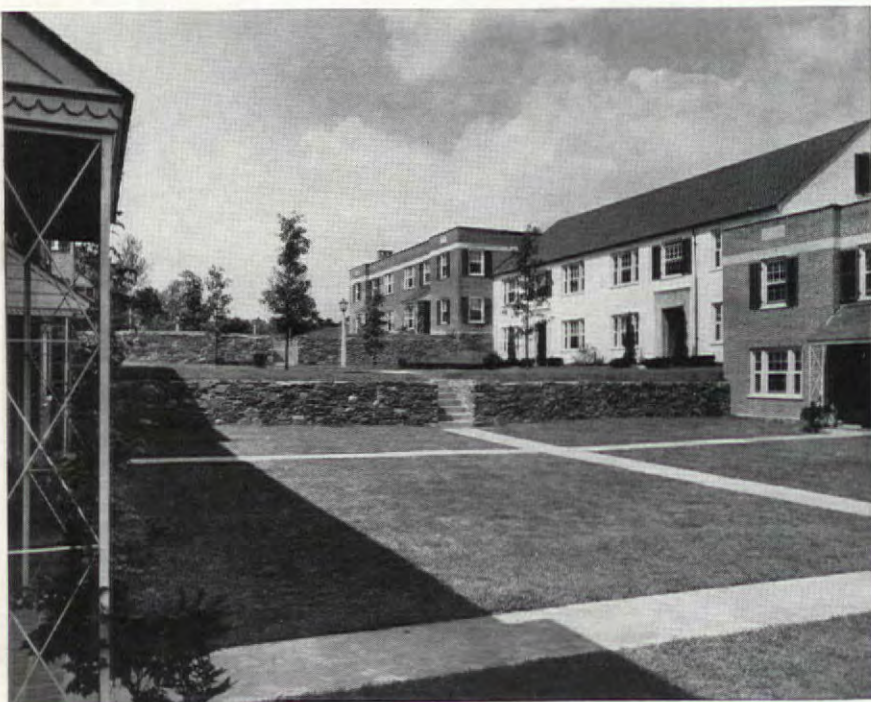
FALKLAND PROPERTIES, INC., SILVER SPRING, MARYLAND
LOUIS JUSTEMENT, ARCHITECT



Todd Aerial Mapping Service



W. F. Roberts Co., Inc.



Located on the outskirts of Washington is one of the most successful of recent housing developments, covering a plot ten and a half acres in extent, with an additional 75 acres available for extension of the project. Designed for families of moderate income, the 178 units are divided about equally into duplexes of five and six rooms, and conventional three- and four-room apartments. Rooms rent at an average of \$14.50 per room per month. The site planning is excellent, taking full advantage of the irregular terrain; particularly worthy of notice is the manner in which the existing wooded area has been incorporated into the plan, and its use as a screen for the 90-foot stack of the power plant. To further accentuate the impression of intimacy created by the small-scale units, some of the buildings have been painted and others left in natural brick. Another device with the same purpose is the variation of roof treatments in the different groups. The group cost \$855,000, of which 75 per cent was represented by a FHA loan.* At present an addition is being constructed, covering about fourteen additional acres.

*To encourage group housing in the low or moderate rental field, FHA will insure loans to approved limited dividend corporations up to 80 per cent, the money to be raised by bond issues, loans from banks or other institutions, or by cooperative subscription, i.e., by the persons intending to live in the development. Plans, financial set-up, and construction must meet with rigid FHA requirements.



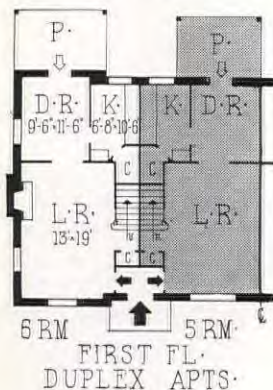
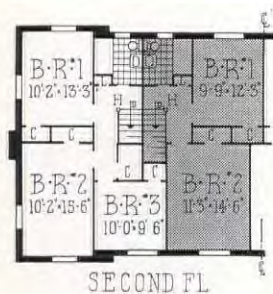
LIVING ROOM IN DUPLEX



KITCHEN



BATH



CONSTRUCTION OUTLINE

FOUNDATIONS

Footings—concrete. Walls—brick and rubble stone. Waterproofing—2 coats bituminous waterproofing on exterior surface of walls below grade and on interior surface above grade.

STRUCTURE

Exterior walls: First floor—12 in. (4 in. brick 8 in. tile) no furring. Second—8 in. (4 in. brick 8 in. tile) wood furring. Interior partitions—wood studs. Concrete columns, except steel for top story; lintels and steel beams to support wood floors and roof. All floor construction combination tile and concrete slabs, except second floor of duplex apartments which are of wood joists.

ROOF

Wood rafters and ceiling joists on steel beams throughout. All flat roofs 20-yr. asphalt: all pitched roofs Buckingham slate.

SHEET METAL WORK

Flashing and gutters—16 oz. copper. Interior ventilating ducts—galvanized iron.

INSULATION

Roofs—3 in. Montana vermiculite laid over stiff cardboard.

WINDOWS

Sash—wood, double hung. Glass—flat drawn window, quality B, single strength, Libbey-Owens-Ford Glass Co.

FLOORS

Basements—cement finish. Wood floors on concrete. E. L. Bruce Co. block flooring laid in mastic. Wood floors on wood joists strip flooring, oak, 13/16 in.

FLOOR COVERINGS

Public halls—asphalt tile, Thomas Moulding Floor Mfg. Co. Bathrooms and kitchens—heavy gauge linoleum.

WALL COVERINGS

Bathrooms—Sealex, Congoleum-Nairn Co. Bedrooms in duplex apartments—wallpaper.

WOODWORK

Trim and exterior doors—white pine. Interior doors—6-panel white pine. Garage doors—overhead type, Rowe Mfg. Co.

HARDWARE

Interior and exterior—Reading Hardware Co.

PAINTING

Interior: Walls—casein, Luminall, National

Chemical & Mfg. Co. Floors—strip floors waxed; block flooring with factory finish. Trim and sash—3 coats Duopake and Persian high gloss enamel, Benjamin Moore Co. Exterior: Walls—painted brickwork, 2 coats Bondex, Reardon Co.

PLUMBING

All fixtures by Kohler Co.; kitchen sinks by Briggs Mfg. Co. Pipes: Soil—cast iron. Waste and vent—less than 2 in. galvanized steel. Water—copper tubing with soldered fittings. Hot water tank—copper lined, steam heated, Richmond Engineering Co.

HEATING

Vacuum return steam. Boiler—two 185 h. p. E. Keeler type C. P. water tube boiler. Direct motor driven Ray oil burners for No. 6 oil, Ray Oil Burner Corp. Radiators—copper convectors, Trane Co. Valves—Crane Co. Hot water temperature regulator, Powers Regulator Co. Heating system designed for later adaptation of zone control.

SPECIAL EQUIPMENT

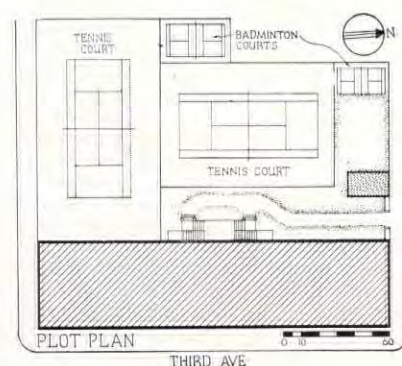
Main boxes—Francis Kiel & Sons. Incinerator, Mourse Bolger Destructor Co.

APARTMENTS 77TH STREET AND 3RD AVENUE, NEW YORK CITY

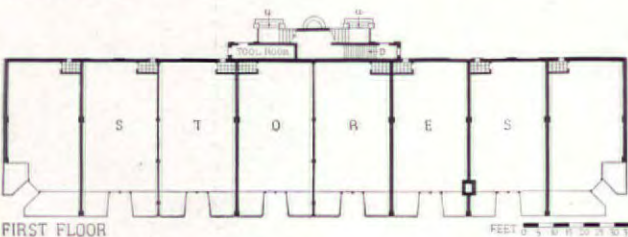
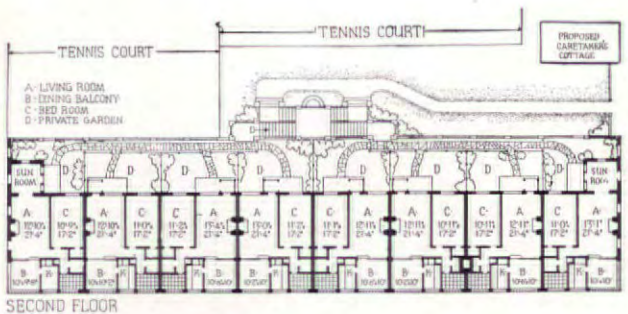
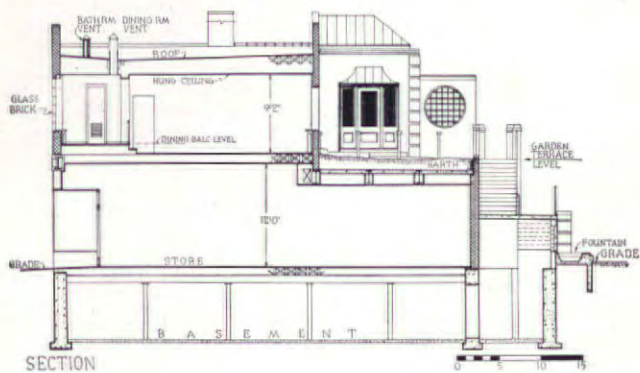


Robert M. Damora Photos

This is the first series of apartments in New York which shows a serious attempt to do something about the elevated trains which rattle by continuously. Located on Third Avenue, an undesirable residential street, the apartments are entered from a side street, are protected from train noises by walls of glass block, and by a central ventilating system which makes opening the street windows unnecessary. On the rear a garden terrace is placed above the first floor stores; tennis courts are located on the level below. The building was built as a taxpayer, with a view to developing the remainder of the plot at a future date.

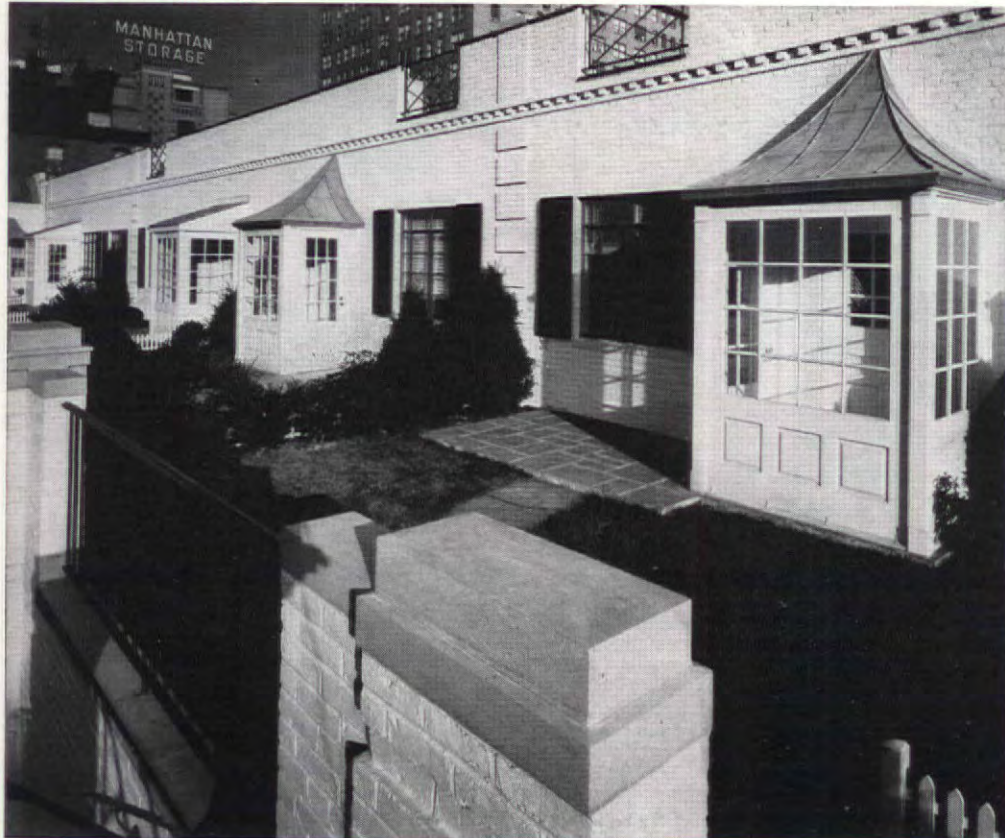


E. H. FAILE, ENGINEER



LIVING-DINING ROOM

GARDEN TERRACE



CONSTRUCTION OUTLINE

STRUCTURE: Exterior walls — brick. Structural steel—National Iron Works.

TERRACE: Concrete slab, 5-ply waterproofing, Barrett Co. One inch cement, subsoil and 18 in. top soil.

INSULATION: Roofs—1 in. Celotex above 2nd floor ceiling, Celotex Co.

WINDOWS: Sash—steel, Detroit Steel Products Co. Glass Blocks—Insulux, Owens-Illinois Glass Co.

PAINTING: Ceilings—Keystone Varnish Co. Floor—Minwax floor finish, Minwax Co. Exterior brick walls—Bay State Brick Coating, Wadsworth, Howland & Co., Inc. Sash—weatherproof aluminum paint, Benjamin Moore & Co.

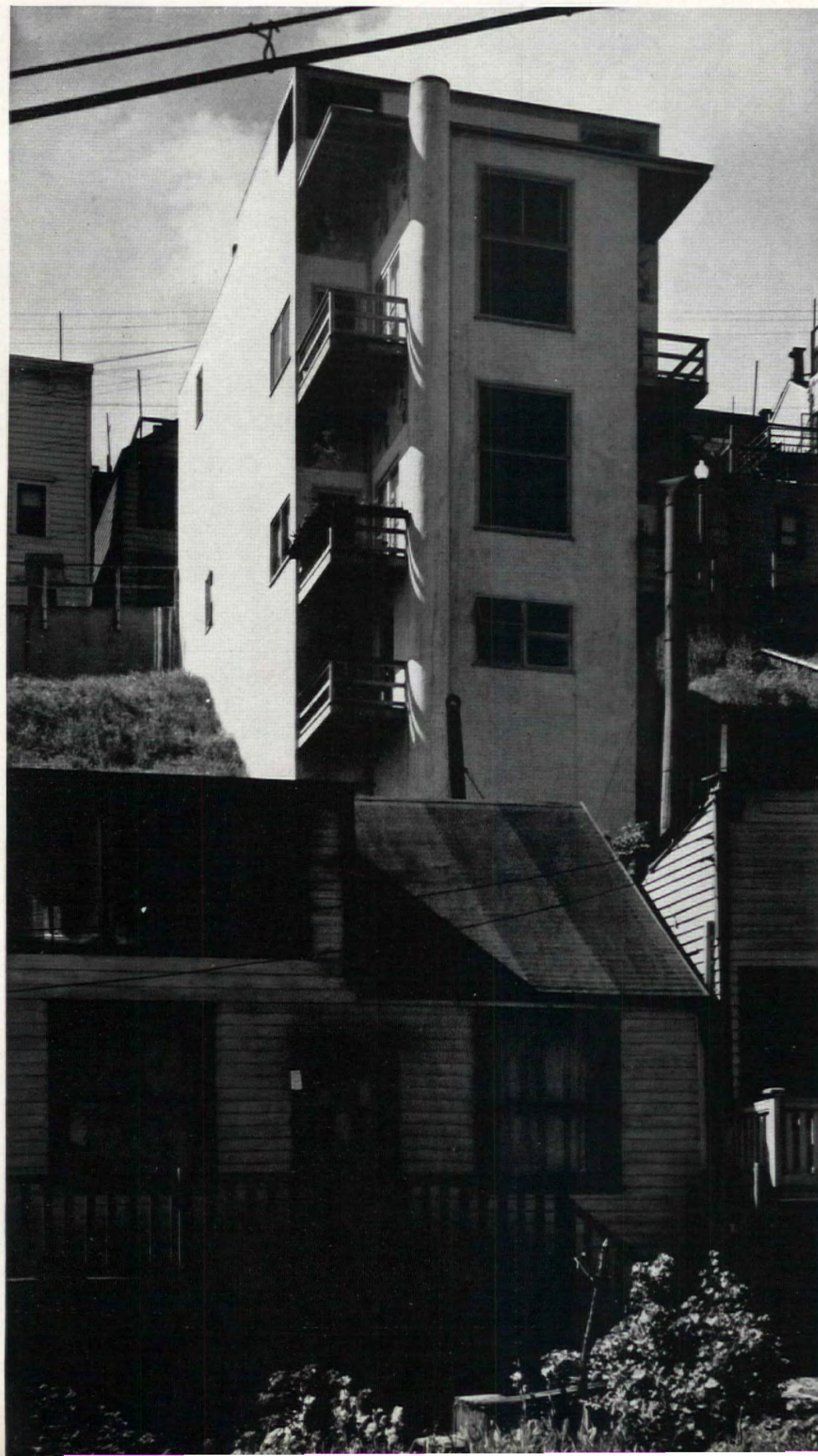
ELECTRICAL INSTALLATION: Switches—Bryant Electric Co. Fixtures—Joseph Kurzon. Panel Boards—Royal Switchboard Co.

PLUMBING: Fixtures—Briggs Beautyware, Briggs Mfg. Co. Bathroom cabinet—Columbia Metal Box Co. Ejector Pump—John B. Ketcham Co.

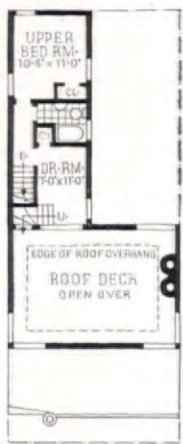
HEATING AND AIR CONDITIONING: Boiler—Kewanee Boiler Co. Oil burner, Simplex Oil Burner Co. Ventilator Fan—B. F. Sturtevant Co. Radiators—American Radiator Co. Kitchen fans—Hirschman. Valves—C. A. Dunham Co.

SPECIAL EQUIPMENT: Radiator enclosures, Metalway Register & Grille Co. Ranges—J. Rose Co. Refrigerators—General Electric Co.

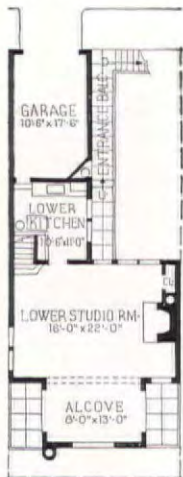
APARTMENTS FOR MISS HELEN K. FORBES SAN FRANCISCO, CALIFORNIA



WILLIAM WILSON WURSTER, ARCHITECT



UPPER BED RM. FLOOR



UPPER LIVING FLOOR

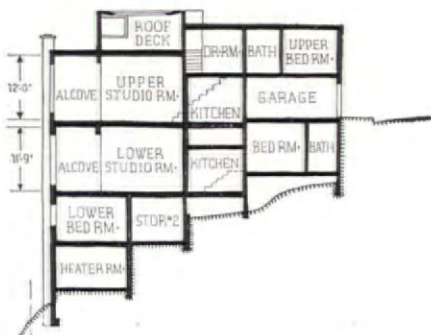


LOWER LIVING FLOOR

SCALE IN FEET



LOWER BED RM. FLOOR



SCALE IN FEET
0 5 10 15 20 25 30 35
SECTION "A-A"

San Francisco is notorious for its difficult building sites, some so steep that cars are garaged on the roof instead of the basement. This apartment house, designed for two families, is an interesting solution of this typical local problem, executed with Mr. Wurster's characteristic disregard for the conventional modern idiom. Each apartment occupies two floors, and is so planned that the main rooms have the view, as well as access to small balconies. One of the owner's requirements was the provision of suitable exterior wall spaces for frescoes; these were arranged as shown in the photographs, sheltered by the overhangs and the projecting balconies. A further attractive feature of the building is the roof deck, sheltered by walls extending up to normal room height. The cost of the building was about \$12,000.





UPPER STUDIO ROOM

CONSTRUCTION OUTLINE

STRUCTURE

Exterior walls—wood frame and sheathing, cement plaster outside, wood lath and hardwall gypsum plaster inside. Floor construction—wood joists, lath and gypsum hardwall plaster on ceilings.

ROOF

Wood joists, solid wood sheathing, tar and gravel roofing. Deck—mineral surfaced roll-roofing over 3-ply membrane, Paraffine Companies Inc.

SHEET METAL WORK

Flashing and gutters—galvanized iron.

WINDOWS

Sash—clear sugar pine. Glass— $\frac{1}{4}$ in. plate in lower section of big windows; otherwise quality B, single strength, Libbey-Owens-Ford Glass Co.

FLOORS

Bathrooms—unglazed vitreous ceramic tile; remainder— $\frac{5}{16}$ x 2 in. plain select white oak over Douglas fir sub-flooring.

WOODWORK

Exterior—clear redwood. Interior—clear vertical grain Douglas fir. Interior doors— $1\frac{3}{8}$ in. Douglas fir stock, 5-panel. Exterior: Glazed doors— $1\frac{3}{4}$ in. clear sugar pine; other—V-joint 1 x 10 in. redwood applied to stock Douglas fir, 5-panel.

HARDWARE

Interior: P. & F. Corbin and Stanley Works. Special—Whitco awning type, reversible, for all except large windows, Vincent Whitney Co.

PAINTING

Interior: Walls and ceilings in kitchen and baths—smooth white plaster painted 2 coats lead and oil; remainder—plaster sand finish with integral color in the plaster. Floors—stain, fill and wax. Trim and sash—2 coats lead and oil, 1 coat flat enamel. Exterior walls—plaster brush-coated with California stucco.

ELECTRICAL INSTALLATION

Wiring system—knob and tube; main supply—conduit. Switches—Hart & Hegeman, and General Electric.

PLUMBING

All fixtures by Standard Sanitary Mfg. Co. Pipes: Hot water—genuine galvanized wrought iron. Cold water—galvanized steel.

HEATING AND AIR CONDITIONING

Two separate warm air systems with filtering. Furnaces—Aladdin Heating Corp., fired with natural gas.



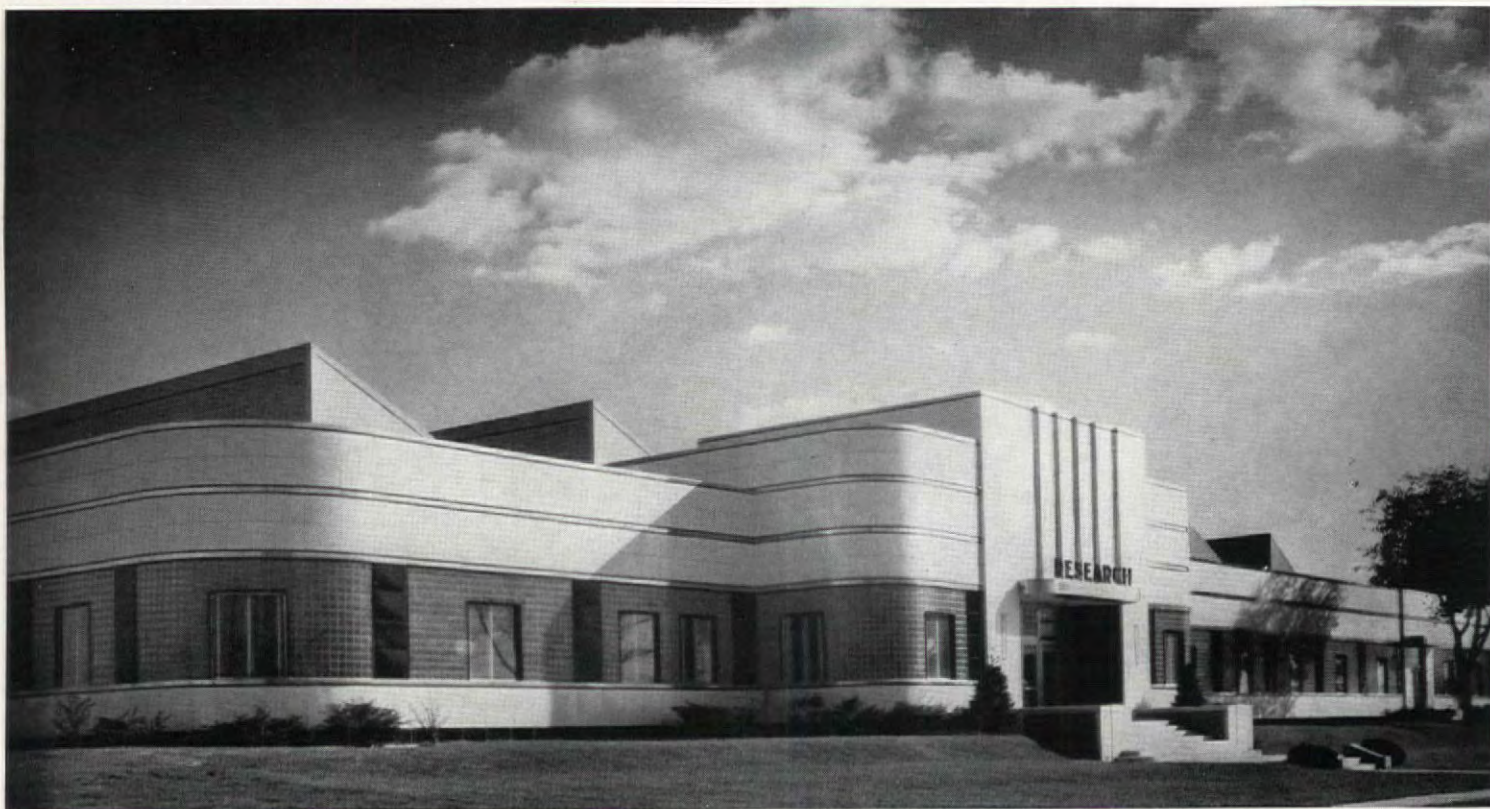
Roger Sturtevant

INDUSTRIAL



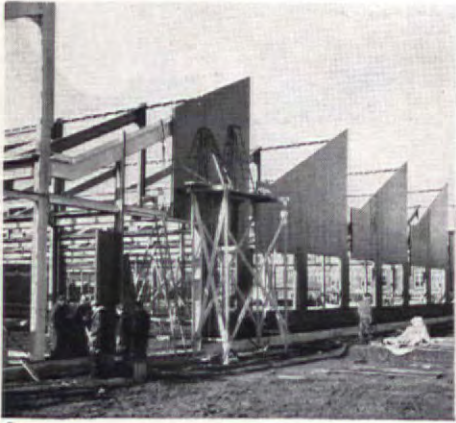
RESEARCH LABORATORIES FOR AMERICAN ROLLING MILL CO.
MIDDLETOWN, OHIO

THE AUSTIN CO., ENGINEERS AND BUILDERS
HAROLD GOETZ, CONSULTING ARCHITECT

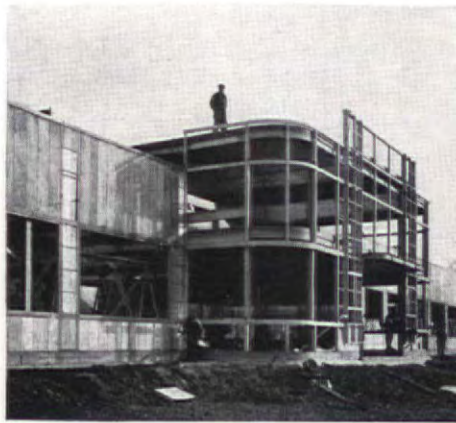


Within what has now become the almost inevitable industrial building outline, this research laboratory shows interesting structural innovations, not entirely due to the desire to use a number of the owner's products. Three of the outside walls are of Steelex panels filled with rock wool. These panels are attached to the welded steel frame by way of hook bolts and angle strips. Then 16 in. wide porcelain enamel panels with stainless steel furring strips are clipped to the outside, plywood covered with 18-gauge steel sheets to the inside. For the rear wall, the sawtooth gables and some partitioning in the laboratory section, special insulated panels are used. They are made from two sheets of light gauge steel separated by a special mica-type insulation. In combination with the extensive use of glass block, the walls provide such good insulation that the air conditioning system is set to provide a relative humidity in winter considerably above that required for the average office building. An unusual feature, due to air conditioning requirements, is the use of glass block in the sawtooth roofs.

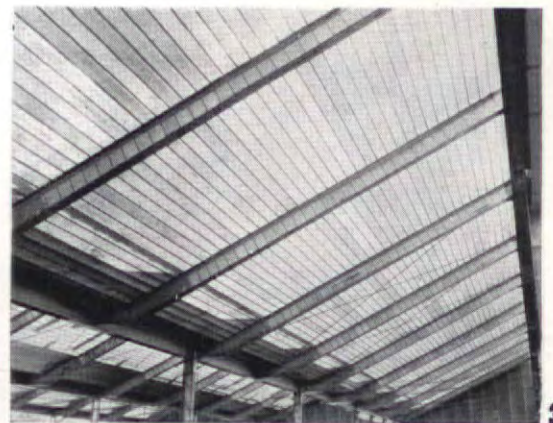




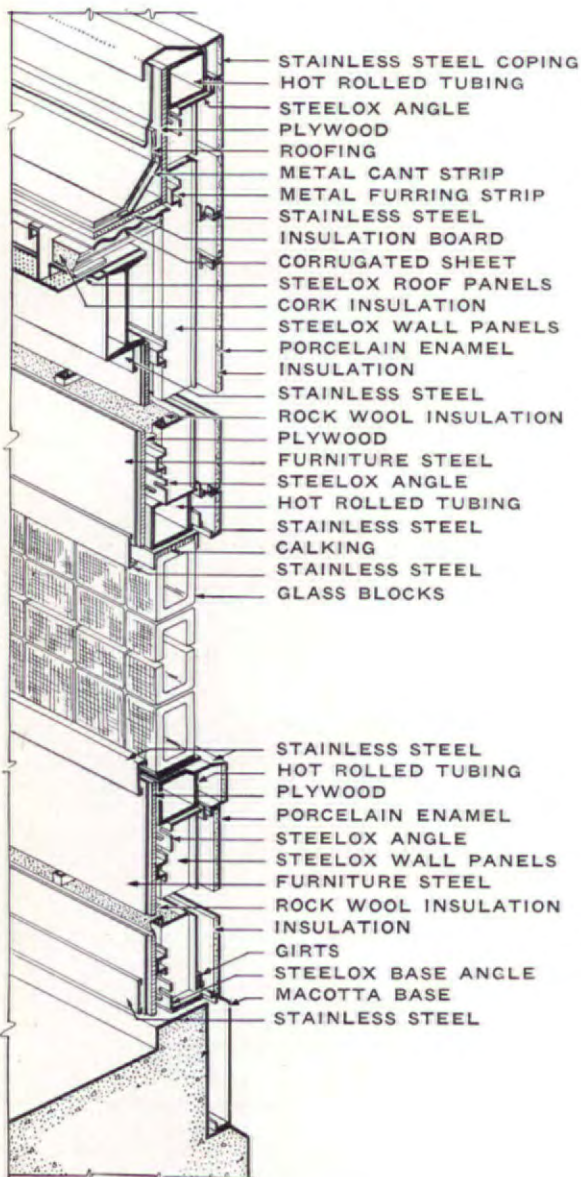
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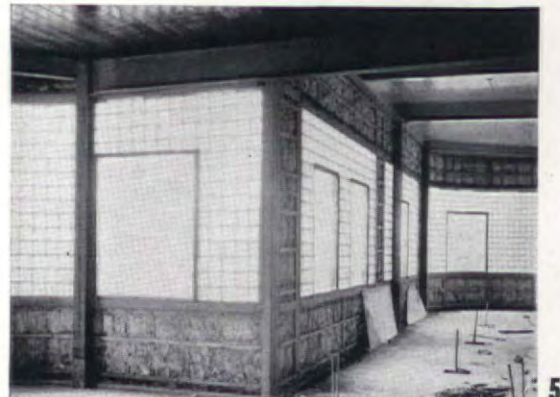
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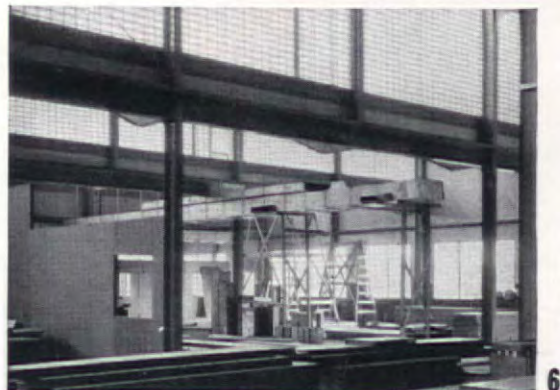
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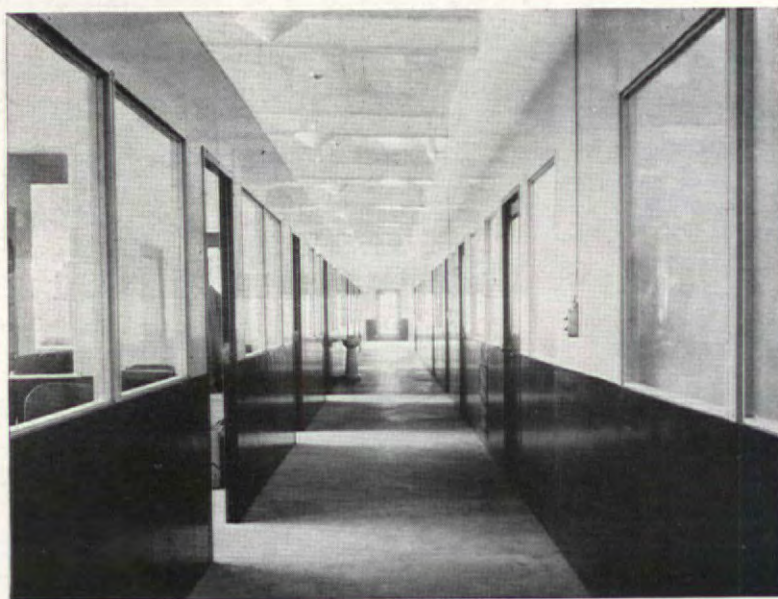
1. Special insulation-filled panels are bolted to angle strips spot welded to the welded steel frame. 2. Hot rolled tubing is welded to the main framework to form a basis for the Steelex panels (seen already in place on the wall at left). 3. The roof is formed from interlocking perforated steel channels. These will be covered with strips of acoustic cork. 4. 16 in. wide porcelain enamel panels are clipped on the front. 5. Inside, the metal-covered plywood has not yet been applied so that the rock wool insulation is still visible. 6. The vertical glass block membranes used for the sawtooth roof are claimed to cut down washing costs, eliminate the danger of leakage, provide good insulation and better lighting than a flat roof. 7. The interior is divided into more than 100 individual offices and research chambers.

THE AUSTIN CO., ENGINEERS AND BUILDERS

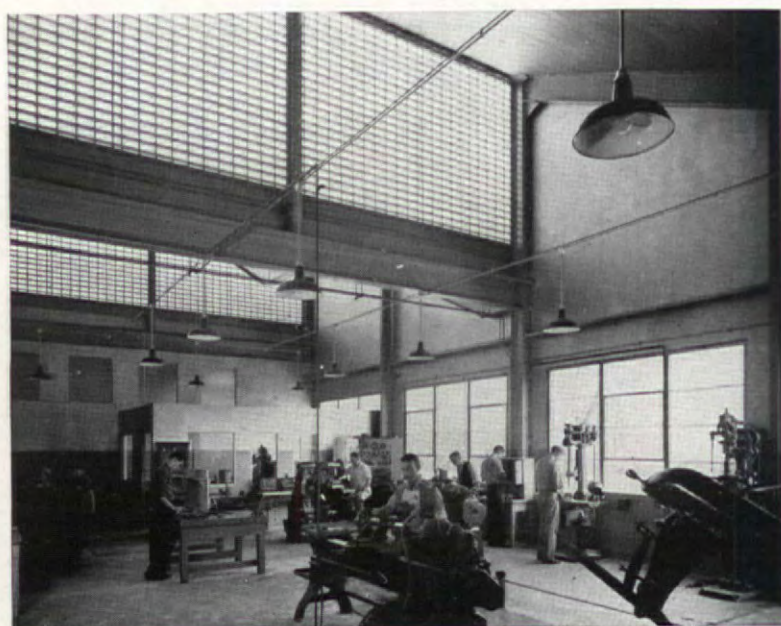
HAROLD GOETZ, CONSULTING ARCHITECT



LOBBY



CORRIDOR



SHOP FOR TESTING

CONSTRUCTION OUTLINE

STRUCTURE

Metal tubing for skeleton exterior walls. Outside finish—porcelain enamel, 5 x 8 x 4 in. glass blocks and stainless steel. Enameled iron sheets attached to Steelox panels with girt strips. Inside—Steelox wall panels with 3 in. channel filled with insulating material. Structural steel—all welded. Floor construction—concrete covered with asphalt tile in main offices. Ceilings—metal, perforated for acoustical purposes; acoustical cork rests on 1 in. metal chairs.

ROOF

Perforated metal panels, acoustical cork, galvanized corrugated iron sheets, 1 in. insulation cork, asphalt, tar and gravel.

INSULATION

Walls—3 in. rock wool. Roofs—insulating cork. Sound insulation—cork in perforated metal ceiling.

WINDOWS

Sash—steel. Glass—plate.

FLOORS

Offices—concrete covered with asphalt tile.

WALL COVERINGS

Offices—18 gauge walnut finished furniture steel. Laboratories—painted steel sheet partitions.

SPECIAL TRIM

Executive offices and reception room—stainless steel. Interior doors—steel. Exterior doors—stainless steel frames, plate glass.

ELECTRICAL INSTALLATION

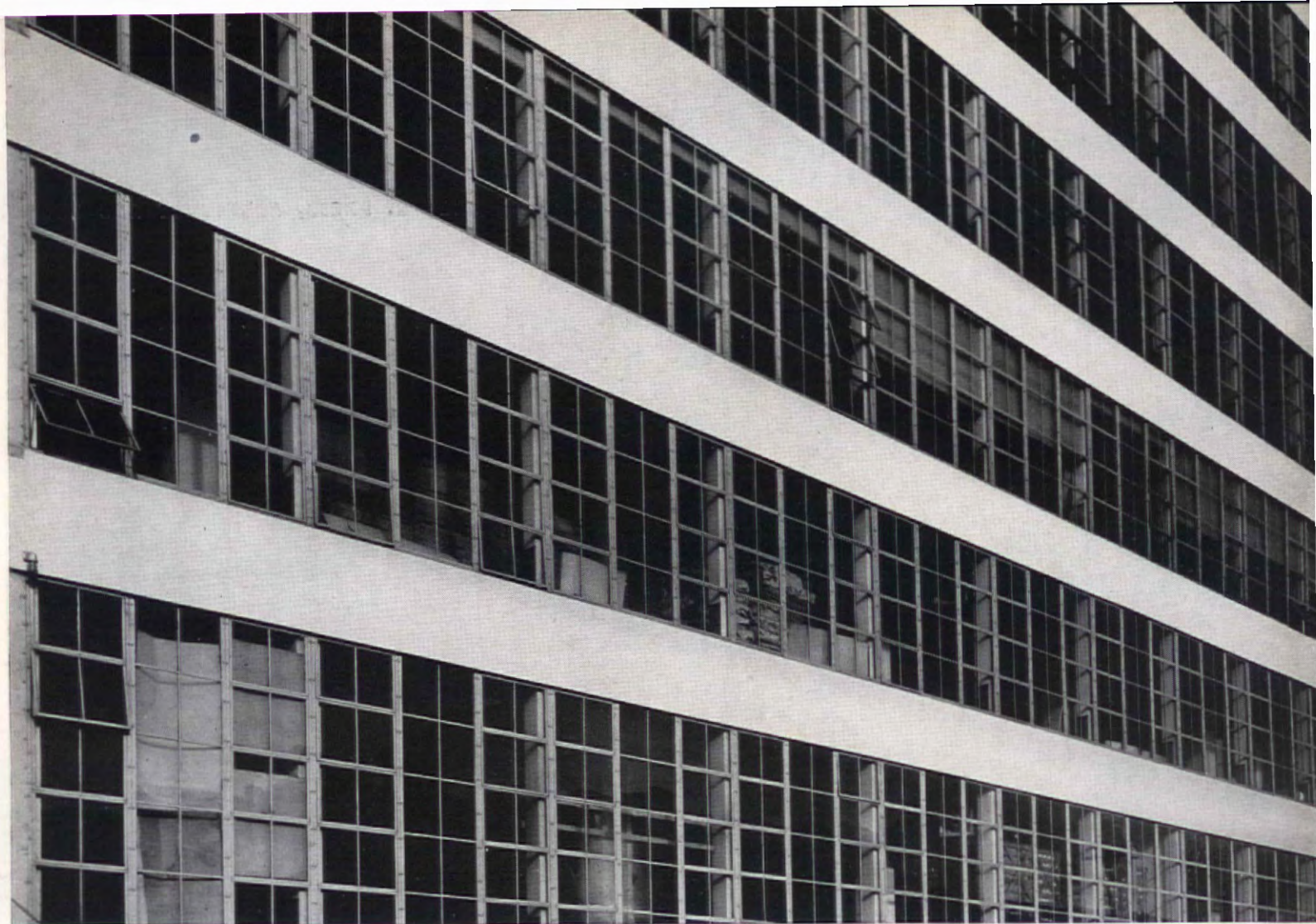
All service lines underground in fiber ducts, accessible through manholes every 200 ft.; controls grouped with main distribution center in laboratories. Fixtures—semi-indirect in offices.

PLUMBING

Fixtures—formed metal.

HEATING AND AIR CONDITIONING

Low pressure steam from boiler in main office building. Deep well water with blower system, 5-units in two systems. Designed summer dry-bulb 80°F., humidity not above 50 per cent. Automatic controls throughout.



Robert M. Damora

FACTORY FOR AMERICAN CAN CO., JERSEY CITY, N. J.

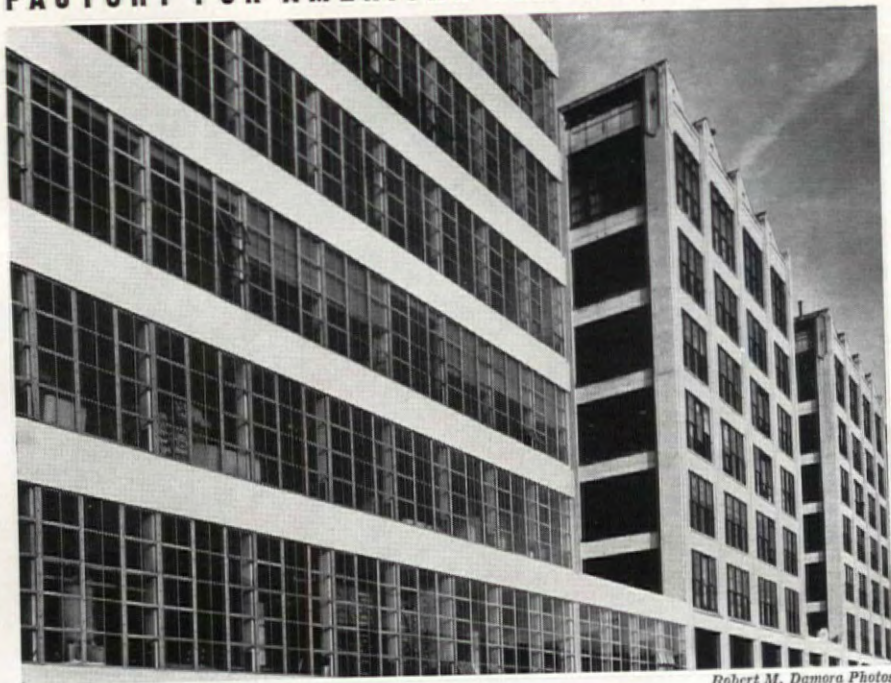
CARL G. PREIS, ARCHITECT AND ENGINEER

There are few more pertinent illustrations of current trends in factory design than this new building, fifth unit in a manufacturing plant of the American Can Co. The earlier structures, as shown in the photographs, are of conventional construction, with windows filling the openings between beams and columns; the resulting grid-iron pattern is neither horizontal nor vertical. In the new unit, due to the use of mushroom columns and reenforced concrete floors, it was possible to dispense with heavy exterior members, and to design the windows as continuous horizontal bands. The improved fenestration not only provides more even distribution of light on the interior, but has also produced a more clearly articulated building.



Charles E. Kneill

FACTORY FOR AMERICAN CAN CO.



CARL G. PREIS, ARCHITECT AND ENGINEER

Robert M. Damora Photos



BUILDING MONEY



W. C. Persons

PUBLICIZING THE MODEL HOUSE

The model house is still the best argument in the subdivider's brief case. It has long been the most effective means of selling other houses on a subdivision and the best way to get the public excited about homes. But it is no secret that the model house has fallen far short of its potentialities.

The majority of model houses today are stale copies of last year's successes. They fail to report to the public the technological advances made within the industry. And they bore more people than they excite. If they were judged by the standards set for salesmen, most of them would be discharged tomorrow.

The explanation for this fiasco seems to be that the average subdivider does not fully understand the necessity for merchandising his houses. He has made the cardinal mistake of assuming that the American public will take any kind of a house, even a bad one, so long as it is marked "Model"; and by the same token, he has failed to grasp the infinite possibilities in the model house for making the public deeply excited about its homes.

The model house technique proceeds on two fronts. First the model house must make architectural news, must be at least good enough and new enough technologically to differentiate itself from the other houses in the neighborhood. Then the public must be made

forcibly aware of its existence and of its virtues. While the building of better model houses and better houses generally must apparently wait until the subdivider learns that good architecture is also good merchandising, the technique of publicizing the model house has been much more successfully developed.

Herewith, THE FORUM attacks only the second part of the problem, presents a summary of the fifteen best ways to publicize any model house. In choosing them, the only criterion which has been used is that the method has actually been put into practice and has actually proved that it works.

One final observation: the model house may function either as an exhibition or as a sample. The exhibition house is more dramatic, more modern, probably more expensive than any other house in its subdivision; its function is to excite the public about homes in general. The sample house is a straightforward copy of the other houses on its subdivision, is as good and as bad as the average U.S. subdivision house; its function is to help sell a specific group of houses. However, since the problem of getting the public to look at them is identical in both cases, no distinction has been made in this article between the two types.

The duty of the model house is to sell other houses by attracting lots of attention to itself. This is publicity, and the sooner it begins and the longer it lasts, the better. There are two broad categories of publicity: Publicity-by-Sponsorship and Publicity-by-Yourself.

SPONSORSHIP MULTIPLIES YOUR PUBLICITY BY TWO.



IS YOUR NAME NEWS? "This is a Franklin D. Roosevelt Home" would presumably attract a maximum of attention. If your name is only one-hundredth as well known in your home town, display it on your land from the day you buy it; but be sure you keep the sign fresh and clean. It will help your subdivision—and your name.

BIG WIGGERY. Whether your name is a big one in your home town or not, there are probably bigger ones. If the First Episcopal Church or the Second National Bank's Board of Directors sponsored your model home, it would be fine. Since they won't, you can turn to the next best thing, the Chamber of Commerce. The Chamber is quite likely to listen to a reasonable proposition for sponsorship provided your plans and your money look big enough to make your subdivision an important factor in the local business picture. You stand an especially good chance if your houses are to reach the market of industrial workers, because Chambers of Commerce like to boast about the stability of their labor supplies. Down in Tennessee last year Developer N. K. Winston put up a number of low-priced houses for the local mill-workers, got the Chamber of Commerce so excited that it declared an official "Better Homes Week." One notch down the big-wig scale from this was the plan used in Westbury, Long Island, whereby a house and lot were bought, furnished, and stocked with such extras as an automobile, a radio, a gas range, and a ton of coal—all out of the pockets of local merchants. Publicity for everybody and a respectable return on the investment were achieved by a raffle for the house, the tickets being sold to the public at the house and in the stores of the contributing merchants.

Biggest and best of the model house campaigns sponsored by big wigs last year was conducted by Niagara Hudson, New York State public utility. First step was the mailing of a six-page questionnaire on preferences in homes to 250,000 Niagara Hudson customers. Framed by the editors of *THE FORUM*, this questionnaire drew 11,207 replies, revealed the preferences of the respondents as to the style, plan, materials, equipment and conveniences of the house which they expected to be able to buy on their incomes. Result was a six-room Colonial house of conventional plan, with automatic heating, mechanical refrigeration and a price tag between \$7,000 and \$8,500.

This composite house was turned over to Niagara Hudson, who passed it on to local architects in Albany, Syracuse, and Buffalo. In these towns the plans were adapted to local conditions, and model houses built under the sponsorship of three national consumer magazines, *Better Homes & Gardens* in Buffalo, *American Home* in Syracuse, and *Woman's Home Companion* in Albany. Each magazine gave full publicity in its pages to its particular house. Geared primarily to push the use of electrical appliances in the home, these model houses were all called "Five Star Homes"—the five stars in this case representing wiring, lighting, automatic hot water, inside weather control, and modern kitchens.

Prior to the opening picked staffs of girls were trained to explain the house and particularly its mechanical conveniences. After opening day, the crowds were care-

A questionnaire sent by THE FORUM to builders and subdividers in 48 States revealed the following cross-section of opinions on the model house:

45 per cent thought the model house worth the effort.

41 per cent thought the model house proved little.

14 per cent thought the model house was pernicious.

73 per cent denied that the size of the crowd was influenced by the merits of the model house, claimed that the public turned up for bad houses as often as for good.

100 per cent reported good attendance at model houses.

3,966 was the average attendance at model homes in any given area over a fair weather week-end.



W. F. Roberts Co.

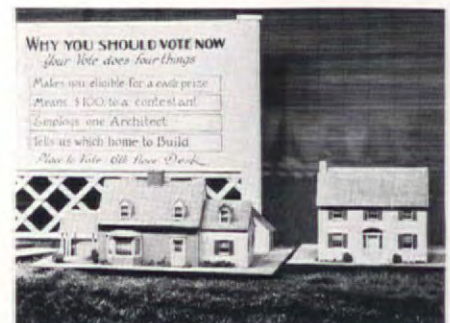
These two houses were publicized by inveterate newspaper-sponsors, The Milwaukee Journal (above, left) and The Washington Post (above, right). The Post gave its name to 18 this year.

fully controlled; not more than fifteen people were allowed to inspect the houses at once. Thus the potential customers of Niagara Hudson were assured a concentrated sales talk not only on the model house but on the virtues of the equipment serviced by their public utility.

PLANS BY CONTEST. Blueprints can make excellent news, pile up a fine head of curiosity for your opening day. And to attract attention to your plans and design is to focus on your most legitimate sales argument. When *Good Housekeeping* sponsored its model house in New Jersey three years ago, it took care to publicize the name of its famous architect—Dwight James Baum. Cost to Subdivider Arthur Rule: the architect's fee.

Subdivider Rule went this scheme one better when he built the small house designed by Architects Allmon Fordyce and William Hamby which had been featured in *THE ARCHITECTURAL FORUM* (January, 1936). Here he not only had a plan blessed by two well-known architects, but doubly blessed by publication in a professional magazine. Again, the cost for the publicity was simply the architect's fee. A grand opera extension of this idea appeared in 1935 when General Electric ran the largest architectural competition ever held, followed it up by a two-year building program based on the winning designs. This program is discussed in detail later.

But publicity gains value in proportion to the degree in which it involves the public in its objectives. The three schemes outlined above after all involve only the architects; for the rest the builder must depend on the impact of the architect's name on the consumer's mind. In Washington, D. C., however, Brothers W. C. and A. N. Miller last year unveiled an approach to the model house which had the additional virtue of directly involving a large number of prospects in the proceedings. In conjunction with a local department store, they conducted a competition for plans and sketches drawn by laymen. Five hundred laymen entered the competition, thereby revealing themselves as thoughtful if not necessarily solvent prospects for a home. The five best designs were redrawn by architects, rendered in scale models which were displayed in the department store. Here the public once again was involved in a contest which revolved around a popularity contest for the five models. The furniture store supplied the \$100 which went to the winning plan. The subdivider paid for five architectural drawings and five scale models at a total cost of some \$300.



Two of the five models displayed in a Washington furniture store as a result of W. C. and A. N. Miller's "Plans by Contest." The contest drew 500 layman-drawn designs, resulted in a house built from the best model.

J. Harold Hawkins, Architectural Editor of McCall's: Don't underestimate the background of quality that editorial publicity creates . . . Editorial columns inherently command, in the minds of readers, respect for their contents. Such publicity is the cream on top of advertising milk . . . Competition is going to be greater and greater. And, too, competition is going to become varied. New sorts of people are becoming interested in selling homes in your territory. A background of editorial publicity will be a retaining wall for reliability and reputation of quality in the home building field. . . .

A recent and successful McCall's Home-of-the-Month (right). It is one of the last in a parade which now numbers over 300 houses.



Underwood & Underwood

Wanamaker's and Burke Harmon have demonstrated the mutual benefits that accrue from builder-furnisher cooperation. Builder Harmon built a model in the store, identical even to the furnishings with one on his subdivision site. Four o'clock one afternoon in came a woman to the store. She liked the model, complete as it was. She met Harmon at six o'clock, gave him a check for \$13,500 for house and furniture. Next morning Harmon had the check certified; that afternoon the woman moved into his subdivision.

BUYERS READ PAPERS. Nine-tenths of all publicity reaches its goal—the public—via the daily papers. The best pages to reach, in order of importance, are the first page, the editorial page, the real estate page, and the last page. All of the ideas in this article will reach the real estate page, some will reach the back page, a lucky few the front page. But there is only one known way to get your model house plastered all over the paper: Have the paper sponsor the house, call it “*The Daily Times*” House.

The two best examples of newspapers which have looked on sponsorship of the model house and found it good are both in Washington: *The Post* and *The Star*. *The Post*, a morning paper, has lent its name to eighteen houses during 1937, giving them considerable space both in pictures and text in its Sunday editions. Publicity continues for four weeks unless the house is sold first. *The Star*, an afternoon paper, keeps its houses open all the time for thirty days. Called Silver Star Homes, they are picked by a committee composed of a man from FHA's Technical Division, the president of the local real estate board, a representative from the National Parks and Planning Commission, a local architect, and a local builder. Both papers pull from 3,000 to 8,000 visitors for their model houses.

AND MAGAZINES. Getting publicity in magazines for your model house before it is built is not impossible. Trick is to keep a weather eye on consumer magazines like *The Ladies' Home Journal*, *Good Housekeeping*, *House & Garden*, *McCall's*, and wait for them to start one of their perennial Homes-of-the-Month campaigns. The last named has had 300 houses built under its auspices in the last three years, local builders erecting from plans featured in *McCall's* pages and cashing in on this prestige publicity by calling the house the “*McCall's* Home-of-the-Month.” To qualify as a magazine-sponsored builder it is necessary first to have a sound local reputation and credit; then to write to the editor of the magazine for plans and specifications which are sold for a small fee; and sometimes to have an architect supervise construction.

Whether it is worthwhile to have a magazine-sponsored house depends on how

large the local circulation of the magazine is. If only three people in your town read the magazine in question, the value is little more than zero. If the circulation is large, it becomes a matter of private judgment: is it worth your while to have your name subordinated to the magazine's in the sign boards and publicity? The answer is usually Yes, since the house will be on your own land.

SELL THE INSIDE, TOO. It can be dogmatically stated that a model house is no model unless it is furnished. To show a bare interior to the consumer is to require of him too great an effort of imagination. This is lucky because it provides the opportunity for two very telling ways to get advance publicity for your model house by getting the cooperation of furniture dealers in your campaign. New Jersey's Arthur Rule made an agreement with John Wanamaker's New York department store whereby the developer's model house was reproduced inside the department store at the same time that it was being built on the site. The store furnished the house from its own stock. Cost of erecting the model house in the store ran somewhat more than it did on the site, was shouldered by the developer.

For several years enterprising Realtor Burke Harmon of New York has been cooperating with John Wanamaker in furnishing his homes. Last year this collaboration reached the interesting point where Wanamaker's featured the pictures of three Harmon houses in a five-column advertisement together with directions on how to reach them. Cost to Harmon cannot be ascertained; but it seems likely that he footed less than half the bill.

THE MANUFACTURER WANTS TO HELP. To get his equipment in a model house and before the public the large manufacturer will go to considerable expense and effort. How potent an ally he can be in the battle for publicity you may judge from the familiarity of the following names: General Electric and its New American Homes; Johns-Manville and its Triple-Insulated Houses; Kelvin and its Kelvin Packaged Homes; Reynolds and its Reynolds Specification Homes. These names ring like news in your ears and your consumers' because they are nationally advertised names. The sponsors may share the cost of local advertising with you, produce their own salesmen. Best way to get this type of sponsorship is to go to your local dealer, talk it over with him.

Typical of material manufacturer participation in a model house venture is the campaign evolved by General Electric. From the competition of 1935 in which some 2,000 architects participated, eighteen plans were selected and, through arrangement with each architect, made available to cooperating builders. The houses contained GE heating plant, air conditioning, all-electric kitchen, radio, lighting which were sold to the builder by distributors with publicity and advertising aid. The builder got the advantages of GE's publicity, virtually assured cooperation from the FHA, and easy payment terms. This campaign, which was pushed with but minor changes for two years, saw the erection of some 500 houses. Cost data on a specimen Long Island house show \$4,000 as the cost of the house, \$1,600 as that of the land, \$1,000 for the equipment, and \$200 as the builder's contribution toward advertising. The local GE distributor supplied a salesman. Sales price: about \$7,000, allowing the builder a profit of about \$200 for the model house, since by a special arrangement there were no financing charges. In most cases the subdivider and the furniture store joined in meeting the cost of the advertising.

In search of an improved merchandising angle, the GE Home Bureau has recently announced a new program of cooperation with the builder. In this latest version the "New American Home" tag line is retained, but the effort now is to



The newest Reynolds Specification House (above) is notable for two reasons: it is of Modern design, rare in model houses; and it had sold five houses before completion.



Chicago Arch. Photographing Co.



Max Kolin

This GE New American Home (second from the top) was built in Chicago's Grant Park on a \$500,000 lot. Also included in the promotion: Crane Co. and the Portland Cement Association. It was torn down after 90 days, but not before 97,500 people, including the invited Miss America of 1936 (above), had a chance to be escorted through it, pictured by the Press.



Buckingham

Above are the first three NLMA demonstration houses. They antedated the NLMA campaign, which Mrs. James Roosevelt inaugurated by driving a nail into a New York NLMA house.

convince builders of the desirability of completely electrifying not one model home but every house in their development. The theme of the program is "Better Living", backed by a potent pocket-book appeal stressing the advantage of buying equipment on a 20-year amortizing basis.

Various prize contests are being employed, including one for builders whose houses best meet GE's broad 10-point specifications. To the winners of these go 20 prizes of \$1,000 each.

NATIONAL NEWS. Bricks, wood, cement, lumber, paint—all of these materials are in all houses and provide an unsuspected frame for the national integration which the building industry so notoriously lacks. The National Lumber Manufacturers' Association took this opportunity by the forelock last year and launched a coast-to-coast campaign for low-priced wood houses built—mostly for publicity's sake—on sets of FHA minimum plans. To the local builder they supplied—and will, for a nominal charge, in 1938—floor plans, detailed schedules for local ballyhoo, plenty of publicity in the papers. This amounts to gravy—but not too much of it. In the first place the profit on such low-priced houses is so small that a large number of sales are required to show a respectable margin of profit. And in the second place it requires considerable hard work by the local builder to cash in on the non-specific publicity of the NLMA's national campaign. If he tries simply to ride it alone, he will find that he has small local interest in his venture.

TO ROLL YOUR OWN PUBLICITY TAKES ENERGY



Underwood & Underwood

The shrewd Brothers Levitt, Long Island operators, won some kind of a prize by drawing the crowd below to see the house above. Methods: radio, sustained newspaper publicity, clothing the house in cellophane with a 12-ft. zipper which they had pulled by four chorus girls from "Babes in Arms." The house was sold within the first four hours. Buyer: Levitts' sales manager.



Underwood & Underwood

Most builders are natural-born promoters: they have more ideas than they can use. The trouble is that they do not use these ideas often or thoroughly enough. Above everything else, successful promotion requires energy; a half-executed publicity plan is no more good than half a forward pass. None of the plans for Publicity-by-Sponsorship examined above will work without a strong campaign of your own. Here are seven old and familiar ways to run your own campaign. Check them to see how many you have actually plugged till they paid.

ONLY GOOD ADVERTISEMENTS PAY. One way to judge whether your advertisement is being read is to insert a coupon entitling the reader to something free like an inspection pass on a special reserved Saturday or a booklet on how to finance the purchase of a home. Another is to count the crowd. In point of fact, most model house advertising that appears in the papers is very bad. This is because most of it is written by rank amateurs. Hire an advertising agency to write your copy. Also write to the Federal Home Loan Bank Board for its booklet describing its new Home Building Service Plan. In it is a fine primer on advertising copy for real estate. And keep firmly in mind this one rule-of-thumb: at least one-fifth of your advertisement should be "white space," clean paper without words on it.

A neat variation of the straight advertising campaign has been developed in Washington. First step is to contract for space in the advertising columns, say, once a week for nine weeks. In this space put a running account of the construction of the model house as told by the young husband and wife who are soon to move into it, illustrated by pictures taken on the site featuring both the couple and the house. As the house progresses, its various features are discussed in a non-technical fashion, the names of the supply dealers are brought



One of the best ways to sell a house is being demonstrated above: the invitation of a good prospect to a house during construction, giving a chance for uninterrupted suasion.



The house, designed by Architect H. Roy Kelley, gained valuable and far-flung publicity by being assembled under a tent, which is being taken off (above), to reveal the house (below).

In the last two years Janss Investment Corporation, developer of Westwood Hills in Los Angeles, has built five model homes. The top-notch attendance record was achieved at *Woman's Home Companion* House of New Ideas (see cuts). That 165,000 visitors inspected the house in the 94 days it was open to the public is confirmed by the Broadway Department Store hostesses who conducted the people through.

On the opening Sunday, March 15, 1936, more than 11,000 people turned up; in the first 23 days there were over 76,000. This is how it was done:

1. The *Woman's Home Companion* house was built on a main highway from Los Angeles to the Pacific Ocean beaches, where traffic is consistently heavy.

2. It had the advantage of showmanship in that it began as a "mystery house" and was built under a tent. Even Ripley's "Believe It or Not" and John Hix' "Strange As It Seems" printed its picture.

3. It received the whole-hearted support of the Crowell Publishing Company, through which national releases were sent out at regular intervals.

4. The Broadway Department Store, which decorated the 8-room Modern home, placed announcements in all out-going store packages, put displays in all its windows in downtown Los Angeles, sent invitations to every employee, and announced the house at every public gathering in the store where women met for book reviews, etc.

5. Jean Abbey, *Woman's Home Companion* Radio Shopper, described the house over the regular radio hook-up. Los Angeles' "Prudence Penny" of the *Los Angeles Examiner*, "Marion Manners" of the *Times*, and Hazel Blair Dodd of the *Herald Express*, all invited their radio audiences to visit the home.

6. Home Decoration classes at the University of California at Los Angeles attended the "unveiling" and visited the house at regular intervals during construction and furnishing.

7. A new 1936 Dodge was placed in the garage at the home, local Dodge dealers were informed and salesmen instructed to make demonstration drives to view the new car and home.

8. The April issue of *Woman's Home Companion* carried the floor plan and a sketch of the house. At the opening regular *Woman's Home Companion* newsboys sold copies to visitors waiting in line to see the house.

9. The house received the usual support from Los Angeles real estate editors and from advertisements placed by material manufacturers whose products were represented in the "House of New Ideas."

10. The Ziegfeld Girls from M. G. M. were photographed at the house as visitors.

11. An elaborate house-warming party was given by the Crowell Publishing Company and the Janss Investment Corporation for everyone connected with the house from a construction, furnishing, advertising, or publicity standpoint.





When Arthur Rule built his diminutive exhibition house inside this tent, it was apparent that he was out for publicity and not protection since there was no top to his shelter. The house was called the "Wee Burns Cottage"; publicity pictures were taken of wee children in wee kilts outside the wee cottage. The witches and goblins on the canvas are part of Arthur Rule's whimsy-that-pays.



America's Typical Family was so designated by a newspaper vote in Muncie, Ind., the town made famous under the name of Middletown, U.S.A., by Sociologists Robert S. and Helen M. Lynd. Mother, father, and the two children were flown to Chicago.

in, and the whole series is tied together in narrative form by the pictures of, and reference to, the couple. Virtue of this plan is that the advertisement can sometimes be presented as a news story, under regulation headlines. The *Washington Post* carried such a campaign late last year.

PRIVILEGED CHARACTERS. An old trick and a good one is to invite a picked list of prospects to view your model house during construction; the best time is when the framing is up but only about half sheathed. The essence of this trick is flattery: you are honoring a group of laymen by giving them a peek at a technical operation. Follow this through by displaying semi-technical, printed explanations on the structure, calling attention to your studding, sheathing, etc. The attendant talk can do a great deal of indirect selling. B. J. McGarry, builder of the Arcy houses in Cleveland, found that it paid to get even more exclusive. He advertised in the papers that his houses (which sold for less than \$12,000) were open for inspection by appointment only.

TA-RA-RA-BOOM-DE-AY. Opening day calls for the biggest blast in the whole campaign; but don't forget that the primary objective of an Opening Day stunt is not so much to amaze those who come as it is to catch the eye of the city editor, and—even more important—the picture editor. The best stunt is the one that makes the best picture. Some classics:

Miss America opened a model house in Chicago. Cost: Nil, since she shared in publicity.

"America's Typical Family" was located in the U. S.'s typical Middletown (Muncie, Ind.) and flown up to Chicago for the opening of Burke Harmon's Colonial Village subdivision. Cost: \$15, the price of one night in Chicago. All-powerful publicity paid for the airplane trip.

Three chorus girls pulled a zipper opening a huge cellophane jacket over a model house in a Levitt subdivision. Cost: Nil, since DuPont shared in publicity.

Owen D. Young sent a telegram congratulating General Electric on the opening of its first New American Home near Boston. Then the local Business Men's Club had lunch there. Cost: The price of reproducing the telegram in newspaper advertisements.

A tent hid a pint-size exhibition house in Wychwood, N. J., during construction and until opening day. Cost: about \$50.

Two hints: write a *brief* story of the opening, giving your full name, the hour, the place and have it mimeographed for reporters; call up the city editor for a photographer.

LET THE HOUSE WORK. Of all houses built or projected in this century, it is probable that the best known is Buckminster Fuller's Dymaxion House. It was a sure thing for the front page. The moral here for the builder is that he should build a model house which will attract attention, through some internal trick. Thus, publicity stems from the house itself in the case of the "X-Ray House," an eye-catching name for a model house, the walls of which are laid open in cross-section to permit visitors to examine the construction. At Garden City in Detroit, Builder Arnold Folker has a set of model houses which he calls collectively "The Expanding House." On one Sunday 25,000 persons trooped out to see the three houses (see cuts, p. 530), which were the three stages of making one house bigger as the family grew bigger, adapting the house at once to the fatter pocket-book and to the growing space requirements.

Neatest publicity trick of 1937 in line with this formula was the model house in Wichita, Kans., called "The House That Talks" (see cut, p. 530). This house built by A. E. Howse's Forest Hills Companies, advertised itself by means of a

In Seattle, Wash., Realtor Hugh Russell decided to look before he leapt, made a careful analysis of existing model houses before he put up his own. First conclusion was that it paid to get cooperation of a furniture dealer in his merchandising scheme. Examining the problem further from this angle he spotted the following common mistakes in the average model house display:

In most cases the model houses were furnished beyond the means of 80 per cent of the prospects.

Pint-sized price tags made it hard for visitors to discover the price of individual pieces of furniture.

Too much furniture in the rooms crowded the visitors, made it hard for them to get a good look at the house's interior.

Most furnished model houses failed to supply any printed matter detailing such vital statistics as the name of the builder, the location, size and price of the house, the prices of the furniture. Without these facts in black and white, visitors forgot, garbled the prime selling facts about the house.

With this much established, Developer Russell persuaded the Rhodes Department Store to furnish and sponsor one of the houses on his Blue Ridge property. Total price of the household furnishings put into the house was kept below \$2,500. Since the house chosen had already been standing for some time, it was spruced up with a coat of dead white paint.

Through the store's advertising manager, Developer Russell arranged to have the store's 800 employees invited to attend a preview of the model house day before its formal opening. Purpose was, first, to make each one of them familiar with the exact route to the model house; second, to arouse their enthusiasm. To dress up the preview, which was held at night, the house was floodlit.

Nine thousand catalogues, showing renderings of each room and a complete price list of the furniture, were distributed at the door of the house. Six thousand more were stuffed into merchandise envelopes at the department store. How successful these pamphlets were can be adduced from the fact that during the two weeks the house was open to the public, not one was discarded in the street outside; and two months after the opening, the store took an order for the complete set of furniture given in the catalogue.

The house was sold on opening day, furniture and all, was kept open only two of the scheduled three weeks because the anxiety of the purchasers to take immediate possession.

Postscript: Developer Russell uncovered one more argument for participation by the furniture dealer when he disposed of the model house's carpet. The dealer took it back, used Developer Russell's attendance figures to demonstrate how well his carpet had survived the equivalent of ten years, average wear—gained in two weeks in a model house.

A coat of new paint and a publicity campaign sold this house and a houseful of furniture on the first day it was open to the public. It was the result of study on the part of Hugh Russell, developer of Seattle's Blue Ridge, into just what methods constitute the best possible approach to furnisher-developer co-operation.



Frank Jacobs

The Blue Ridge "Ultra-Livable" Home.



Smith Studio Photo

The three units in The Expanding House (above) were not for sale but were won on 25 cent chances sponsored by the Civic Association of Garden City, near Detroit. Builder was Arnold Folker, who owns the 1,800 acres called Garden City, has won for the plat over 3,000 residents, police and fire protection. Each unit is a complete home in itself.



The owners of the automobiles above are inside a model house. Behind them they have left the developer the makings of a list of authentic prospects: their license numbers. To obtain these numbers, Burke Harmon hires a boy to sit at the entrance of his subdivisions and jot them down. Other developers might well copy him, then go to the State Registry of Motor Vehicles and match numbers for names for salesmen.



Eugene B. Smith

"The house that talks" is near Wichita, Kans. Loudspeakers hidden in the walls proclaim the house's virtues, making use of the first person singular in the speeches, as: "I have an all-gas kitchen, my roof is made of . . .".

monologue over a loudspeaker apparatus connected in the walls. Typical in its routine: "My walls are made of . . . I am electrically wired with . . . My interiors have three coats of paint . . ."

AND PAMPHLETS, BY THE THOUSANDS. Your name and your subdivision's name should be constantly before your potential public, and should if possible be before those prospects in their homes. On the site you should have literature describing not only the house and the easy financing, but also some material detailing what makes for a good house: perhaps a list of fifty things to look for in a well-built home. But you should not stop at literature distributed on the site. Easiest way to get pamphlets to the attention of a large audience is to do what New Jersey's Arthur Rule and a handful of other developers have done. His *Good Housekeeping House* in Wychwood featured a gas refrigerator and a gas range. With this as justification, he got his local gas company to print up and distribute with its monthly bills over 27,000 four-page leaflets as invitations to see the model house. The leaflet had a picture of the house, a description of how to get to it, a rehearsal of the names connected with its design and building, pictures of gas stove, refrigerator, and heater. Cost was covered by the gas company, which also contributed a sales girl to demonstrate the gas kitchen to visitors. Printing pamphlets on his own hook, a builder would need about \$45 to get 10,000 small four-page pamphlets with four pictures on glossy stock.

HITCH THE MOVIES TO YOUR LOAD. A difficult but ingenious method of publicizing your model house is to advertise it in cinema "trailers."

The classic of this method of obtaining publicity was achieved by Harry Huffman of Denver. Huffman, who operates seven of Denver's theaters, proposed that the Denver Real Estate Exchange build a home, have it furnished, and give it away through his cooperation. He agreed to furnish 36,000 ft. of first-run film, and then carry this film into second-run houses, advertising the cooperating firms on a *pro rata* basis in proportion to their individual contributions to the cost of the home. But when it was found that on this basis the smaller contractors (guttering, etc.) would be prorated a length of film too small to be of any use, the plan was submitted to the Piggly-Wiggly Stores, which promptly put up \$3,000 to pay for these small contracts, and contributed a credit on groceries to the future occupant of the house for a year, at the rate of \$50 per month.

THE RADIO CAN TALK FOR YOU. The worst results and the best results have been obtained for a model house and its subdivision by way of the radio. To publicize his Markham Little Farms in Chicago, Fred J. Walsh spent \$1,500 on a campaign which consisted of five "spot" announcements a day over sustaining programs, every day for thirteen weeks. In those thirteen weeks only four people (who did not buy) declared that they had heard the "spot" announcements over the air and had come in as a consequence. That campaign is now finished.

But in New York, over WOR, one of the four big local stations, the Levitts sent a half-hour program which was broadcast late Sunday morning. It featured a band playing sweet dance music, as well as vocalists. The commercial announcement included directions on how to reach the subdivision. The programs ran through the spring and early summer, and since they were timed to come just as the family was deciding where to drive Sunday afternoons, they proved effective in drawing visitors to the two Levitt developments on Long Island. Time cost \$300 per half-hour, the program expenses probably another \$500.

BUT PUBLICITY IS NOT EVERYTHING

Publicity is a valuable weapon in the merchandising of the model house, and the fifteen methods presented here are all worth trying. But it is well to remember that publicity is less than half of any sound merchandising plan. The rest is the model house itself.

How the model house should participate in the merchandising of other houses is largely a question for the architects and the public to solve together. The model house should set the style pace for Subdivision, U.S.—but not get too far ahead of the public's current tastes. It should avail itself of as many of the technological advances within the building industry as it can—but it should not get beyond the public's purse. Which is to say that it should be a better house every year, and noticeably so.

A better house every year means, of course, good architects and more of them. From a purely objective point of view, this is the basic requirement for merchandising the American home successfully. To a good architect add an aggressive publicity campaign and the model house will become what it should be—exciting news.

John Cushman Fistere, Architectural Editor, *Ladies' Home Journal*: The model home has generally been the prime merchandising tool of the home building industry. Just as in the publishing business one picture is worth a thousand words, one house is worth a thousand pictures in the home building field. It is, however, up to the developer to make his model home "model," and to capitalize on the generous cooperation of the manufacturers, publications and other associations who offer advertising and promotional cooperation.

An exciting model house, and consequently a successful model house, was The Ladies' Home Journal House (below). The No. 1 drawing-card of the New York Home Show, it was designed by Architects Wallace K. Harrison and J. Andre Fouilhoux. It featured a circular glass wall which could be lowered into the ground to make the living room part of the garden. This is a true "exhibition" house: it excites the public about homes in general.

[For builders' opinions on *The Model House* see appendix page 52.]



Frank Randt

LABOR AND MATERIAL COSTS

level off as construction continues to decline contraseasonally.

The FHLBB small house cost data for October.

THE Federal Home Loan Bank Board's monthly small house cost index last month showed that prices of labor and materials had, on an overall basis, settled slightly in the New York area, in the Indianapolis area, and in the Des Moines area. Bids returned from the contractors in those districts were lower than in July for the same house in eight cities, substantially the same in three others, and higher in only three.

This reaction, which reflects the contraseasonal slump the building industry has suffered since August has yet, however, to bring prices down to the level of last April. And the cubic-foot costs of October, 1937, average \$0.025 higher than October, 1936. St. Paul, with a rise of \$0.053 per cu. ft., has shown the speediest upswing.

Largest cost rise registered for the period from July to October was in Sioux Falls, South Dakota, where the base house would have cost \$6,442 last month, but only \$6,263 last summer. Most marked decrease in costs was reported from White Plains, N. Y., where the decline from summer to fall was \$445, or 6.5 per cent of a \$6,857 house. In this connection it is interesting to note that the price in White Plains jumped farthest—12.4 per cent—in the period from April to July, thus best demonstrates the current reaction from high prices.

By last month the price of the FHLBB base house in Seattle, Wash., had declined slightly from its summer and spring highs. It was still, however, nearly \$1,000 more expensive than it would have been in

January of 1936, according to the FHLBB estimates. In answer to whether the villain of the piece was labor or material cost, Hugh Russell, developer of Seattle's Blue Ridge and an official of the Seattle Real Estate Board, released some detailed figures in proof of his contention that labor demands on the West Coast were throttling home-building.

Realtor Russell first demonstrated that the cost of a house ready to move into in his Blue Ridge was, in 1936, \$5,433. By the summer of 1937 this had risen, according to his actual figures, to \$6,957, an increase of 28 per cent. Reason for this appeared in a comparison of the percentages of the 1936 and 1937 totals. In 1936 labor cost \$625, 11.6 per cent of the \$5,433 total.

(Continued on page 50)

The House on Which Costs Are Reported is a detached 6-room house of 24,000 cubic feet volume. Living room, dining room, kitchen, and lavatory on first floor; 3 bedrooms and bath on second floor. Exterior is wide-board siding with brick and stucco as features of design. Best quality materials and workmanship are used.

The house is *not* completed ready for occupancy. It includes all fundamental structural elements, an attached 1-car garage, an unfinished cellar, an unfinished attic, a fireplace, essential heating, plumbing, and electric wiring equipment, and complete insulation. It does *not* include wall-paper nor other wall nor ceiling finish on interior plastered surfaces, lighting fixtures, refrigerators, water heaters, ranges, screens, weather stripping, nor window shades.

Reported costs include, in addition to material and labor costs, compensation insurance, an allowance for contractor's overhead and transportation of materials, plus 10 per cent for builder's profit.

Reported costs do *not* include the cost of land nor of surveying the land, the cost of planting the lot, nor of providing walks and driveways; they do not include architect's fee, cost of building permit, financing charges, nor sales costs.

In figuring costs, current prices on the same building materials list are obtained every three months from the same dealers, and current wage rates are obtained from the same reputable contractors and operative builders.

FEDERAL HOME LOAN BANK DISTRICTS, STATES, AND CITIES	CUBIC-FOOT COST		TOTAL BUILDING COST							
	OCT. 1937	OCT. 1936	OCT. 1937	JULY 1937	APR. 1937	JAN. 1937	OCT. 1936	JULY 1936	APR. 1936	JAN. 1936
NO. 2—NEW YORK:										
NEW JERSEY										
ATLANTIC CITY	\$0.253	\$0.235	\$6,063	\$6,173	\$6,702	\$6,107	\$5,641	\$5,725	\$5,768	\$5,860
CAMDEN	.245	.216	5,878	5,866	5,864	5,489	5,183	5,073	5,170	5,101
NEWARK	...	.242	...	6,474	6,400	6,071	5,811	5,794	5,787	5,771
NEW YORK:										
ALBANY	.225	.221	6,120	6,048	6,098	5,569	5,302	5,341	5,198	5,218
BUFFALO	.269	.236	6,465	6,501	6,108	5,820	5,661	5,680	5,483	5,487
SYRACUSE	...	.232	...	...	5,890	5,575	5,567	5,580	5,580	5,628
WHITE PLAINS	.267	.241	6,408	6,857	6,100	6,137	5,777	5,779	5,718	5,652
NO. 6—INDIANAPOLIS:										
INDIANA										
EVANSVILLE	...	.233	...	5,816	5,816	5,518	5,586	5,585	5,570	...
INDIANAPOLIS	...	.232	...	5,890	5,921	5,540	5,558	5,802	5,755	5,739
SOUTH BEND	...	.246	...	6,395	6,349	6,180	5,906	5,849	5,844	5,894
MICHIGAN										
DETROIT	.255	.221	6,121	6,379	6,278	5,398	5,297	5,293	5,265	5,136
GRAND RAPIDS	.233	.214	5,598	5,560	5,547	5,294	5,138	5,174	5,174	...
NO. 8—DES MOINES:										
IOWA										
DES MOINES	.269	.260	6,468	6,483	6,444	6,090	6,246	6,130	6,072	6,003
MINNESOTA										
DULUTH	.266	.240	6,391	6,373	5,990	5,697	5,765	5,671	5,616	...
ST. PAUL	.288	.235	6,916	6,911	6,442	6,049	5,628	5,523	5,284	5,287
MISSOURI										
KANSAS CITY	.251	.218	6,018	6,198	5,731	5,387	5,240	5,311	5,304	5,229
ST. LOUIS	.268	.247	6,437	6,512	6,590	6,227	5,918	5,915	5,976	5,997
NORTH DAKOTA										
FARGO	.251	.230	6,028	6,062	6,002	5,743	5,524	5,614	5,529	5,491
SOUTH DAKOTA										
SIOUX FALLS	.268	.238	6,442	6,263	5,999	5,839	5,716	5,711	5,688	5,655
NO. 11—PORTLAND:										
IDAHO										
BOISE	.263	.237	6,324	6,273	6,214	6,045	5,691	5,604	5,784	5,750
MONTANA										
GREAT FALLS	.299	.272	7,174	7,134	7,125	6,548	6,540	6,598	6,474	6,457
OREGON										
PORTLAND	.257	.232	6,157	6,058	5,951	5,591	5,561	5,307	5,277	5,278
UTAH										
SALT LAKE CITY	...	.246	...	6,375	6,166	5,820	5,915	5,793	5,793	5,778
WASHINGTON										
SEATTLE	.272	.249	6,517	6,642	6,659	6,045	5,977	5,690	5,587	5,575
SPOKANE	.285	.257	6,851	6,796	6,543	6,375	6,173	5,712	5,712	...
WYOMING										
CASPER	.268	.266	6,439	...	6,295	6,193	6,386	6,203	...	...