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FEBRUARY 1945

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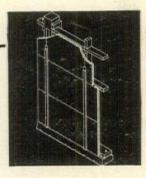
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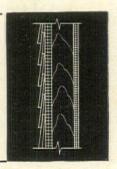
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FEBRUARY

1945

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44 colors, each available strips

45 standard sizes plus feature strips

46 ranging in widths from 1/2" to 4".

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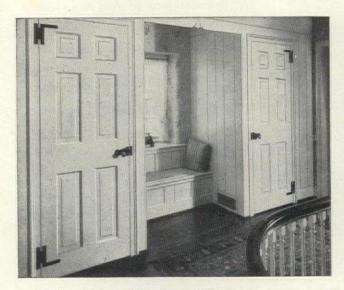


closets in the HALL—Two closets in the entrance hall are better than one—as this attractive arrangement demonstrates. Note how the stock doors of Ponderosa Pine enhance the effect of graciousness and serenity.

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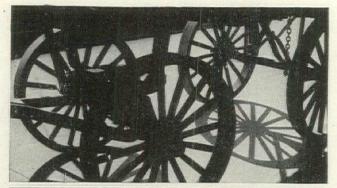
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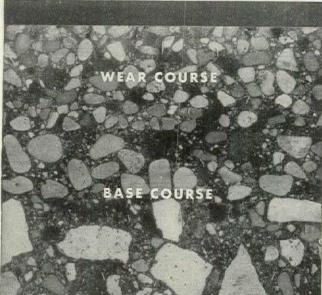
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NEWS . . . Other fellow's business (this page) . . . Taft Committee puzzles through probe (page 6) . . . Metropolitan extends its housing front (page 7) . . . Home builders look, listen, lament (page 8) . . . U. S. grants prefabs to Britain and France (page 9) . . . Indianapolis attacks its slums (page 16).

WHO, ME?

Last month, as in every month, there were plenty of earnest chartings of housebuilding's postwar objective. United Auto Workers' R. J. Thomas put it in terms of 6½ million jobs. Housebuilder Robert Gerholz called it rebuilding one-fourth of the U. S. To the Secretary of Agriculture it meant replacement of 2 million substandard farm homes, major improvement of as many more. The National Housing Agency rounded it up at 12,600,000 new houses over the next decade—with 46 per cent to cost their occupants less than \$30 a month.

It was easy to see that all of these statements merged into one basic goal—better housing for more Americans. But the month brought few signs that house-building men were close to agreement on the path that would speed their industry to a broader market. At the home builders' meeting in Chicago as at Senator Robert Taft's housing probe on Capitol Hill, special interest groups were busy pointing accusing fingers at each other. Housebuilding reform was always the other fellow's business.

"We don't need to look at the building industry," said realtor spokesman Herbert Nelson flatly. "It is all right. We don't need to worry about our financing system for homes. It is good. What we need to look at and worry about are the endless interferences of the bureaucrats, government, and some labor leaders."

FHA's Abner Ferguson had little to say about how his agency could broaden its mechanisms for boosting housebuilding to a bigger market, pointed instead to a familiar bogey—the throttling effect of obsolete local building codes.

While New York's Mayor told about his city's experience with the crippling cost of labor's jurisdictional disputes, an AFofL representative solemly intoned: "Reduction in interest rates is the most important step to lower the cost of home ownership."

Insurance companies warned that forcing interest below 4 per cent would mean drying up housing investment. Said one insurance executive: "Builders should cease their attacks upon fair market rates of interest, offer capital a lucrative return, and work within their own industry to effect economies which will permit them to tap the broad market in lower-priced housing."

Housebuilder Don Loftus, who wants his industry to get into the low cost field, suggested no more cogent step in that direction than action to "stop the constant raping of home ownership in America by public housers."

Decrying federal research aimed to improve housebuilding techniques, lumber dealers wanted those interested in cost reduction to look anywhere but at traditional structural methods.

But while most still thought the way to housebuilding Utopia lay through somebody else's backyard, there was evidence that some building men were ready to think about how to take the special interest fences down. Producers' Council president Douglas Whitlock proposed establishment of a National Construction Industry Council as part of the U.S. Chamber of Commerce to "provide much-needed machinery for helping the industry arrive at a common viewpoint." In a year when many matters vital to housebuilding will come before Congress, housebuilders' shepherd Frank Cortwright told his flock, "it is a sorry spectacle indeed to find that those speaking for the various banking interests, the producers and distributors of materials and equipment, the engineers and architects, the contractors, builders and brokers, all of whose very existence and well-being is dependent upon the outcome of these issues, have failed to agree upon more than a few basic generalities."

The National Housing Administrator reminded that delay in reaching a "united housing front" may mean a "makeshift housing program with the federal government inordinately in the picture because the communities have not yet had time to get prepared—with local initiative subordinated because it has not been given a fair chance to mobilize—with private enterprise at a disadvantage because it has not learned

(Continued on page 6)

NEWS

precisely what the government plans to do." Only flaw in these fine words were some subtle hints dropped at the Taft hearings that NHA has its hands full keeping peace in its own official family.

Better news came from Oklahoma City where 16 builders agreed on a formula for cooperative effort. The members of Allied Home Builders, Inc., who learned how to work together on war housing jobs, will pool their resources to build a 1,000-unit postwar development. Indianapolis got together on a program that will unite public and private effort to clean up slums. In New York, Metropolitan Life, unruffled by the many controversies its housing program has touched off, announced plans for rebuilding four more blighted blocks.

Meanwhile, in foxholes and Quonset huts around the world, millions of G. I. Joes, when they had time to think, wondered what kind of homes U. S. building is readying for them.

BYRNES ON HOUSING

War Mobilization Director James Byrnes is a direct gentleman, with a novel distaste for conference. Last month a large part of official Washington was reported miffed at Byrnes' failure to confer with it on a variety of recommendations made in the director's first report on war mobilization and reconversion. One of the persons Byrnes had neglected to confer with (Harry Hopkins headed the list) was certainly the National Housing Administrator. That much was clear when Byrnes' matter-of-factly observed that temporary war housing "could well be used to improve present conditions in city slum areas and in certain farm areas."

The Lanham Act, which put up the money for public war housing, specifically prohibits postwar use of temporary units for residence. Although NHA has suggested that some of this housing might be dismantled and rebuilt as farm homes, it has rigorously leaned over backwards to demonstrate that it has no intention of asking for modification of the Lanham Act so that the temporaries could add new blight on old in urban areas.

The National Association of Real Estate Boards was quick to see a whole new set of slums springing up back of Jimmie Byrnes' few words. And while many a realist knew that most of the temporary war housing is better than the homes of one-third of America's families, few wanted to write such a compromise with housing need into national policy. Pessimists pointed out that the temporaries would be likely to stay in use long enough, without benefit of special legislative encouragement.

Like all lookers-ahead, Byrnes sees relief of our present housing shortage as paramount in providing immediate postwar employment. Said the assistant President: "I am sure that Congress will want to consider the extension and liberalization of the several measures in existence when war was declared to assist home builders in financing such construction."

BIGGER WEST POINT

Both U. S. Military Academy cadets (increased by 25 per cent since 1939) and the nation at large can now brush aside the possibility of postwar pruning of this principal military plant. West Point wants more barracks, bigger administration buildings, a larger mess hall—and has chosen Delano and Aldrich to design them. This New York firm won first place in a competition between ten invited participants.

Plans for the Academy expansion are still termed "nebulous." But history, precedent, and the military sense of fitness leave little doubt as to the character of the new buildings. The turrets and crenelations of West Point's "military Gothic" architecture are a familiar part of the Hudson River landscape.

Post offices excluded, the number of federal buildings designed and erected on the basis of architectural competitions has been, since construction of the Capitol in 1792, negligible. As the first federally sponsored competition since the Smithsonian Gallery contest in 1938, the enlargement of West Point is a promising token. Architects could hope that the big bundle of federal building that will follow the war might include some competitive chances to design from the ground up.

TAFT PROBE LAUNCHED

While the month's biggest building news eddied around the corners of the shiny table at which Senator Robert Taft and his committee sat down to take a prolonged look at housing matters, little of it got into the sheaf of carefully prepared testimony offered by federal housing chiefs, private investors, labor spokesmen, and the ubiquitous National Committee on Housing.

Looking hard for significance, Washington newsmen found it in Federal Home Loan Bank Administrator John Fahey's polite refusal to give his opinion of whether the National Housing Agency should go on being boss of all federal housing operations. Corner whispers had it that NHA is anything but a happy family, that both the FHLBA and the Federal Housing Administration are angling to get back to their prewar independent status. FHA Commissioner Abner Ferguson



"BLITZ" IN NEW YORK

Not bombed but blitzed to make way for new building is this midtown Manhattan corner. Razing the old mansion (designed by Cass Gilbert) that was home to the swank Union Club means eventual construction of a 12-story department store. The mysterious buyer who last spring acquired this imposing Fifth Avenue landmark (see Arch Forum, May, '44) had at last emerged as Best & Co. This women's specialty store plans to move 20 blocks up the Avenue to the new site opposite Rockefeller Center, also slated for a blockful of new buildings to house Standard Oil of New Jersey. Architects for new Best's: Shreve, Lamb & Harmon.



SENATE HOUSING PROBERS get a sheaf of charted facts, listen patiently to familiar arguments, but so far find few specific recommendations, little general agreement on how legislative action can best help housebuilding ride the road to a maximum market. (I. to r.) Senators C. Douglass Buck (Rep., Del.), Dennis Chavez (Dem., N. Mex.), Robert F. Wagner (Dem., N. Y.), Chairman Robert A. Taft (Rep., Ohio), Allen J. Ellender (Dem., La.).

gave little support to NHAdministrator John Blandford's fairly unspecific proposals for broadening the FHA peacetime insurance formula in a way that will make it easier for builders to get construction loans covering large-scale operations.

Senator Robert Wagner sat quietly through the early sessions, said not a word about an omnibus bill which, the knowledgeable sidelines said, he will soon introduce to give NHA a permanent lease on life, grant more federal dollars for slum clearance and low cost housing, improve and extend FHA and FHLBA legislation. But Senator Wagner and others would pick up many a fact and many an opinion from the parade of housing witnesses. For this reason, the Taft Committee, although it has no power to originate housing legislation, will have a potent effect on the action that Congress will eventually take.

Solemn Senator Taft shrugged at eloquence on behalf of a big public housing program, also observed decisively that aid for private rebuilding is not a proper function of the federal government. Here are some of the things the Senator and his committee heard:

Broadened Public Housing Program. The Federal Public Housing Authority chief, Philip M. Klutznick, offered specific and cogent proposals notable among the preponderance of generalizations of familiar housing goals. He urged advance loans for planning local housing projects, 100 per cent borrowing by local authorities from private investors,

reduction of the period during which federal grants are made from 60 to 45 years, exploration of a federally-aided program for remodeling existing housing. Klutznick believes that a gap of from 15 to 20 per cent should be left between the top of the low income market and the lowest possible floor of private building "to leave the way free for private capital to move into the lowest possible markets."

Better Rural Housing. Secretary of Agriculture Claude R. Wickard reminded that two-thirds of the nation's farm families are ill-housed and that nearly half of the inadequate houses are beyond repair. Recent federal loan and limited subsidy programs have affected less than 4 per cent of the nation's farm homes, he said. But efforts to improve farm housing "must be integrated closely with other farm programs."

Recommended Secretary Wickard:

- Modification of limitations on Farm Credit Administration loans to make them more readily available for construction and repair of farm buildings.
- > Government insurance of mortgage loans for farm housing.
- Expansion of the present tenant purchase loan program.
- Constructive use of subsidy "so as to remove the need of further subsidies as soon as possible."

Public Works. Said Federal Works Administrator Philip B. Fleming, plugging for a federal appropriation that will help finance local planning: "At the



PUBLIC HOUSING CHIEF Philip Klutznick uses chart to back his program; (below) Miles Colean, Committee adviser, Senator Wagner, John Blandford, Philip Fleming.



present time no American city, so far as I know, is planning its own salvation realistically. About a billion dollars' worth of postwar construction has been reduced to completed plans by our states and cities-less than half as much public construction as was carried on in the depression year of 1933. For the greater part, plans already drawn are for the most urgently needed public works; they do not look to thorough-going redevelopment."

Interest Rates. E. S. Brigham, head of the National Life Insurance Company of Vermont, told the committee that federal action to force down mortgage interest rates would eventually mean taxing one group of the population to help another. Brigham said interest can go no lower than 4 per cent without drying up investment funds.

Annual Wage. "A guaranteed annual wage," said R. J. Thomas, chairman of CIO's housing committee, "would give the worker a sense of security which would inevitably increase his productivity and result in lower unit cost." Boris Shiskin, AFofL economist, said he saw little chance for important economies through an annual wage guarantee or through prefabrication. Knowhow gained through war emergency building will, he thought, mean some saving in labor costs.

TWO UP, THREE TO GO

New York's gas house district, setting for a thousand tales of the seamier side of Manhattan life, will after the war give way to garden apartments, according to

NEWS

Metropolitan Life's newest move to change the city's housing face. Peter Cooper Village, a 1,500 unit development, will bloom from four waterfront blocks adjoining the site of the Met's 18-block Stuyvesant project. Although the last haunts of the notorious gas house gang disappeared with construction of East River drive, the Peter Cooper site. spotted with gas tanks, is the heart of one of New York's seediest neighborhoods-a tenement and factory mixture.

As an unaided private investment, Peter Cooper Village, intended for medium-income families, ought to encounter few of the ideological and judicial wrangles that focused around Stuyvesant Town and Riverton. Metropolitan has found that the path of an investor hoping to do housing good is not an easy one. New to our economy, publiclyaided private investment is still searching for a satisfactory equation between maximum social benefit and an attractive and safe return. The public aids that will help to bring Stuyvesant Town to birth gave taxpayers the right to contest exclusion of Negro tenants. Met's own answer to the discrimination challenge-a housing project in a crowded Negro neighborhood - came close to getting a public vote of disapproval from Harlem residents.

While the biggest U. S. corporation has never gone as far toward assum-

ing responsibility for housing reform as some long-viewers might hope, it has no rival for stepping up housing standards on a big-scale and non-philanthropic basis. When Met backed the first New York law permitting insurance companies to invest 10 per cent of their assets in construction of low cost housing, most of its colleagues were busily helping to lay the ground-work for the giddy real estate inflation of 1926. When Met built its first housing in Queens, 50 per cent land coverage was so unprecedented as to make building headlines. The Met's project, said ARCH FORUM in 1922, demonstrated "that it is possible to achieve the same percentage return on a building which covers but 50 per cent of the plot as in a building complying with the legal limit of 70 per cent. The land thus freed provides large openings through the block in each direction and produces 'block circulation'." For Peter Cooper in 194X, Met could plot an economic return on the basis of 25 per cent land coverage. And there were plenty of signs that Met, undismayed by the many thorns in the path of housing uplift at 6 per cent, is just beginning its postwar building program. Already the Chicago press (see p. 10), hungrily eyeing the New York projects. was chafing at "ox-cart" laws which bar such big insurance investments from Illinois cities.

3,000 BUILDERS jam Chi

Bulging the walls of Chicago's ancient Sherman Hotel, some 3000 members of the National Association of Home Builders held their first and probably this year's last big convention. Lure which produced this attendance was not only the routine of speeches, but more particularly the high optimism which has been sweeping the building field-in figures which one convention oracle pegged at 1,750,000 new houses a year. And if an additional lure was needed. there was a vast, well-arranged exhibit of materials and equipment, mainly prewar, for conventioneers to inspect and paw. Rumor had it that one manufacturer with the temerity to display a

Robert Johnson



HOUSEBUILDERS' NEW CHIEF Merrion, Chicago, with Mrs. Merrion

postwar product had to board it up at the insistence of WPB.

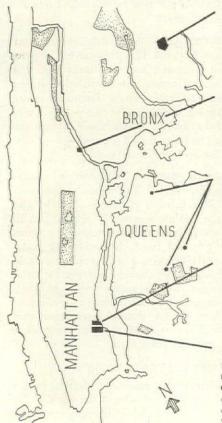
To a capacity crowd, NHA's John Blandford, FHA's Abner Ferguson and Curt Mack repeated the now-familiar refrain that we must win the war and prepare to win the peace, that government's partnership with building would continue until "every American is decently housed."

Only speaker to inject a new note was Roland J. Thomas, president of CIO's United Auto Workers and chairman of his union's Committee on Housing and Community Development. Thomas called for a national goal of 60 million jobs and a home building budget of 21/4 million workers. More arithmetic from the Thomas slate: "The average prewar, on-site worker was employed 33 hours per week, and only 35 weeks per year, or a total of 1,150 hours a year . . . In the light of our national debt alone, and the national income needed to meet it an employment of less than an average of 1,440 hours per year for each worker engaged in the home building industry will be inadequate. At this rate of employment . . . slightly over 13/4 million homes could be produced each year . . . This must be the minimum postwar volume goal of the industry."

That the Thomas program was taken seriously was apparent next day when NAHB's new president. Joseph Edward Merrion, as his first official act, ap-

(Continued on page 10)

METROPOLITAN LIFE WILL BE LANDLORD TO 80,000 NEW YORKERS



PARKCHESTER

1938 \$50,000,000. 12,272 families. 51 bldgs. Average monthly rent: \$13 per room. 130 acres. 27% coverage. 313 persons per acre. Unaided private investment, New York Insurance State Law amended.

Postwar

\$6,000,000*. 1,250 families, open to Negroes. 7 bidgs. Average monthly rent: \$12.50 per room*. 12 acres. 25% coverage. 347 persons per acre. Redevelopment Companies Law of 1943 (see Stuyvesant Town, below).

QUEENS PROJECTS

\$7,500,000. 2,125 families. 54 bldgs. Average monthly rent: \$8.35 per room. 121/2 acres. 50% coverage. 575 persons per acre. 10-yr. tax exemption on improvements, \$9 per room rent limit, N. Y. Insur. Law, 1921.

PETER COOPER VILLAGE Postwar

\$8,500,000* 1,500 families. 15 acres. 27% coverage. 333 persons per acre. Unaided private investment, New York Insurance Companies Law, amended. Intended for medium-income group families; rent levels not yet set.

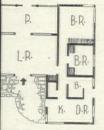
STUYVESANT TOWN

\$50,000,000*. 8,842 families. 35 bldgs. Average monthly rent: \$14 per room*. 75 acres. 25% coverage. 393 persons per acre. 25-yr. tax exmptn., 6% gross return limit, benefit of condemnation, N. Y. Rdvlp. Co.'s Law. * Estimated.

vention, see prewar products, hear midwar speeches, examine "postwar" houses

All models by Diorama Corp.

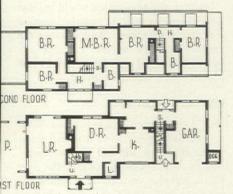
atured at the National Association of Home ilders' convention exhibit were these models winning designs in a nation-wide home plang contest. Designs bowed briefly to modern including fixed-glass windows and mergeding and dining space.



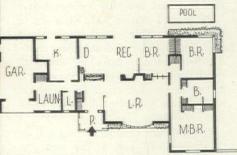
Earl Carrothers, Martin Braun, A. J. Del Bianco.



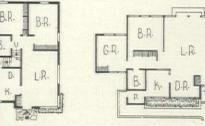
Hugh Selby, Edward Conrad.



Charles Nixon, Carl Kastrup.

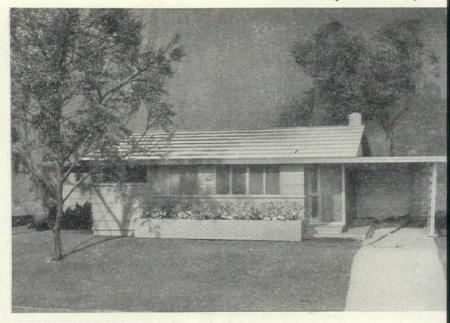


Charles and Arthur Schreiber.



E. C. Mahoney, Arthur Braun.

Todd Tibbais, Noverre Muson.



SUMMER RESORT HOME. (1)



INDUSTRIAL WORKER'S HOME. (2) FARM HOME. (3)

SUBURBAN HOME. (4)



CITY HOME. (5)



G. I. HOME FOR TWO. (6)



NEWS



pointed a committee headed by retiring president Robert Gerholz to confer with strongly entrenched AFofL and hotly ambitious CIO housing committees.

Other recurrent convention themes:

- Neighborhood planning (nobody questions).
- ▶ How to reduce house costs, now 30 per cent above prewar (nobody knows).
- Public housing (nobody for).
- More plate glass (nobody against).

A final sober note was the builders growing concern with housing for Negroes whose financial stability makes them suitable buyers.

That convention organizers George Nixon, Frank Cortwright and Elizabeth Shoemaker had put over a smash hit, established an annual precedent was obvious.

DOLLARS AGAINST BLIGHT

Milwaukee will "start the fight to eliminate blighted areas" with \$250,000. The Milwaukee Housing Authority got this slice of the city's 1945 budget with instructions to use the planning dollars where they will do the most good. The city's finances are in excellent shape for backing an all-out attack against blight. Milwaukee is debt free for the first time in its history. With no part of the 1945 tax levy earmarked for debt amortization, the city will have at the year's end a \$10 million reserve as a solid beginning for its postwar building fund.

SLUMS IN THE HEADLINES

What to do about slums and better housing crowded war news on the front page of three Chicago newspapers last month. The *Herald-American*'s new executive editor, an ex-Marine who believes in "lots of sock," was finding plenty of sock in slum clearance. More important, editor Lou Ruppel's socks were hitting where they might do some good.

There were the usual pictures of crumbling tenements, garbage - choked alleys, over-flowing slum toilets. There was the tear-jerking story of the slum child who refused a Halloween lantern because "I have no place to hang it . . . we live in the middle of the room." But under the Hearstpaper's strident "Dirty Shirt Town" headlines, veteran reporter William Cartan pointed to a more basic and malignant blight: the involved spoils-splitting between state and local politicians that has so far thwarted every effort to clean up the city government. In sharp words calculated to sink deep into Chicago's voting consciousness, Cartan hit at the state's "covered-wagon constitution," the city's crippling tax

system, "Habeas Corpus, the traction cow" a lucrative and ancient legal wrangle that has forestalled any solution of the city's transit problem.

The Herald - American's rip-roaring crusade was scarcely a week old when Marshall Field's Sun launched a quieter investigation of Chicago's slums. Less general in focus, these stories spotlighted statistical and factual evidence of the severity of the city's housing problem. The Sun found "the animals in Lincoln Park zoo more comfortably and warmly housed than some 240,000 Chicago families."

The thoughtful News chose another sector of the housing front. Written by Washington correspondent E d w a r d Lahey and based on National Housing Agency data, the News series examined the reasons why home ownership is barred to many families, turned up many a rousing indictment of the housebuilding business. Sample: "The construction industry is a prehistoric mastodon, which by some sardonic quirk of evolution has managed to survive despite an obvious inability to adapt itself to a rapidly changing environment."

Whether the press gibes would prompt civic action as well as popular opinion remained to be seen. And whether the potent *Tribune* would continue its silence remained a secret in Col. Robert McCormick's limestone tower.

PREFAB TO EUROPE

Only a last-minute debate between WPB and British buyers as to whether closet doors might be left out of the temporary houses delayed closing of the deal which will ship enough U.S. panel materials to build 30,000 emergency houses for bombed-out Britishers. Most temporary U. S. war houses lack closet doors; WPB argued that to leave them out of the British contract specifications would save both lumber and shipping space. Although well-accustomed to "austerity" regulations, the British buyers were reluctant to sacrifice closet doors, which, in the damp English climate, are more than an amenity.

The two-bedroom houses that will go to Britain will cost \$1,700 each, be equipped with kitchen range and bathroom fixtures. The Foreign Economic Administration will put up the money under lend-lease arrangements. As procurement agency, the Federal Public Housing Authority will, as soon as a standard plan is approved, accept bids on the panel materials from Eastern prefabers. Bidders' time schedule and productive facilities will, with cost, be determining factors in contract awards. Policy will be to distribute the work as

(Continued on page 12)



Williamsburg design in polished cast brass





MILLIONS have said it and millions more will be repeating it so long as builders' hardware is selected to stay within a too meager *allowance*

Most people buy builders' hardware only once. Unfortunately, too few will "pay the fiddler" for their false economy and replace cheap, unsightly hardware. Instead, they will continue to curse it,

and you, too, because they hold you responsible.

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WRITE our nearest office for the booklet

--- "The Inside Story of Permaglas."



MONTH IN BUILDING

(Continued from page 10)

widely as possible among eligible producers; contracts will probably be let in lots of 200, 500, and 1,000 units.

Although the London Herald titillated its readers with pictures of such U. S. prefab ventures as the Dymaxion house and the igloo canvas balloon model, all contractors must conform to the standard plan. Britain's limited labor supply and lack of familiarity with special U. S. prefab techniques would make use of a variety of prefab systems impossible.

Some of the panel materials that will provide barracks-type shelters for 150.-000 French dock-workers will come from dismantled U. S. war houses; FPHA will soon let contracts for production of the rest (see ARCH FORUM. Jan., '44). The French need 5,000 units of barracks housing in a hurry, but are interested in Buckminster Fuller's current plans and other new prefab types for later purchase. The newly-created Ministry of Reconstruction and City Planning also seeks to buy U. S. machinery and raw materials that will put French industry to work at building their own prefab structures.

REAL ESTATE WALLFLOWERS

Even in 1944's boom trading, big suburban estates, long deserted by their wealthy owners, stood out as real estate wallflowers. But as 1945 brought building and many another business closer to a postwar start, it also brought new kinds of buyers for the big properties that have waited for years on the edge of the market.

War expanded industries, already marking out their place in postwar production, were finding the country homes of the rich useful for setting up research and administrative centers. Buying the Long Island estate of the late Frank W. Woolworth, Reynolds Metals planned to install a model kitchen, equip an auditorium for product demonstration, use the basement for deep-freeze experiments. Cargill, Inc. moved to the castle-like Rand home outside of Minneapolis, planned a postwar residential community for its employes.

Sample of another kind of future for the big plottages that few U. S. families now want to own came from Pittsburgh, where the 114-year-old Schenley mansion will make way for building lots. David A. Hendershaw, heading a group of investors, acquired the property for \$65,000, plans to begin building 400 \$7,000 houses whenever priorities are available. Considered one of the finest examples of Greek revival achitecture in America, the ballroom of the mansion, with its Corinthian columns, mammoth crystal chandelier and fireplace, will be rebuilt as a recreation room at the University of Pittsburgh.

The late Arthur Brisbane, who as the father of the syndicated editorial more than once preached the wisdom of real





LOTS FOR NEW HOUSEBUILDING will be cut from the 400-acre site of the Schenley mansion near Pittsburgh (top); Reynolds Metals acquires Woolworth country estate to house its research activities.

estate investment, bought 400 New Jersey acres as a site for his country mansion, with medieval tower overlooking the Atlantic Ocean. Last month the editor's heirs said the property would be given to the State of New Jersey, remodeled for use as a veterans' convalescent home.

RESEARCH PROTEST

Wincing noticeably at the National Housing Agency's recent probe of house costs (see Arch Forum, Dec., '44), the National Lumber Dealers Association is bent on showing everybody that things aren't nearly so bad as they might be. Compared with other products on a long-term basis, house costs are not as much out of line as NHA thinks, say the lumber dealers in an injured tone.

If it "costs too much money for a family to own or rent a house," the Association sourly observes, then almost any other product you could name costs too much, too. An example: Figuring in a regular trade-in, it costs \$9,400 to own a \$900 automobile for 25 years. Figuring in maintenance, it costs \$7,500 to own a \$5,000 house for 25 years.

The lumber dealers are particularly anxious to get out of first position in the NHA line-up for cost reduction. They agree that this is a laudable objective, but think that the structural shell of the house is over-emphasized as the place to focus the attack. "If housing costs are materially reduced, it will be through a

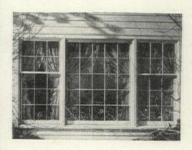
(Continued on page 16)





Bay windows need not be luxuries if built of Curtis Silentite stock units. Use Curtis bays to make small rooms look larger—to add charm and variety to your plans. Curtis offers several styles from which you can choose,

There's a wealth of architectural distinction in this Curtis picture window. Notice the narrow muntins—a feature of Curtis "streamlined" window design. Your clients will be sure to like "window walls" like this,





Even the smallest homes can have modern window arrangements when you specify Curtis Silentite Windows. These are Silentite casements. The wide variety of sash styles gives you greater scope in your planning.

Silentite's narrow mullions (no weights or pulleys) give a more beautiful effect when windows are grouped. More light is admitted, too. You'll find it easy to "sell" home owners on Silentite's many features.



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Curtis leadership in research—Curtis improvements in window and woodwork design—will meet the post-war demand for modern windows of all styles and sizes. Keep up to date on windows and stock architectural woodwork with Curtis mail the coupon for complete information.



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MONTH IN BUILDING

(Continued from page 12)

reduction of component costs all down the line."

Most of the Association's alarm centers around the Wagner-Kilgore bill providing for an office of federal housing research. NHA suggests that one major undertaking for such an office might be the pursuit of a mass-produced, monolithic wall panel that would replace the 14 layers of conventional wall construction. The lumber dealers view such an enterprise with profound pessimism. "With the Bureau of Standards, the Department of Justice, the FHA, and the FPHA already concerning themselves with the problems of housing, materials, distribution, and restrictive practices, why should the taxpayer spend another \$25 million per year to investigate and study housing problems?" Citing the failure of elaborate experimentation in Europe to find a satisfactory substitute for conventional brick and frame construction, the dealers cheer themselves up with the conclusion that probably nobody ever will.

With the Senate subcommittee on housing (see page 7) taking a look at the housing research bill, with backing from the National Committee on Housing, approval from the National Association of Home Builders and the National Association of Real Estate Boards, the lumber dealers looked very much like lone wolves at low cost housing's door.

SHARING THE TAX BURDEN

Convinced that a more realistic tax situation for real estate is vital to the health of the building industry, the Pennsylvania Industrial Union Council (CIO) has interested itself in the tax burdens of home owners. Backing some remedial legislation soon to be introduced in the state assembly, the Council offers this recipe for real estate tax easement:

- Reimbursement of all municipalities out of the state motor fund for cost of traffic handling. Total state traffic cost amounts to \$6 million. Pittsburgh home owners pay \$700,000; in Philadelphia the Salary and Wage tax shares a \$3 million traffic cost with real estate tax levies.
- Return to the cities of a portion of the state gasoline tax and of 25 per cent of license fees, this fund to be used to pay for street maintenance.
- ▶ Shift of some of the local tax burden to public utilities through a three per cent state tax on gross receipts, to be distributed among localities on the basis of population. Pennsylvania is the only

state in which real estate owned by utilities is tax exempt.

- Investigation of liquor distribution, with the aim of returning to local governments a proportionate share of license fees to cover the cost of enforcing liquor laws.
- State operation of all hospitals now maintained by city or county governments for treatment of contagious diseases.

SHACKTOWN'S END?

Indianapolis slums are not the manystoried rookeries that crowd the blighted land of older, bigger U. S. cities. They are mostly single and double houses; sagging porches, leaking roofs, lack of plumbing brand them as cast-offs-the housing lot of the city's poor. Nor can the city's blighted neighborhoods be charted as a dirty collar around the central business district. Indianapolis is spotted with shacktowns; some of them stretch along the city's rim. Cure for blight in these low density areas will be more like cauterization than major surgery. Last month Indianapolis planners were ready to present to the state legislature a remedial formula which they thought well-fitted to their city's special

The Indianapolis Postwar Planning Committee thinks that \$2,500,000 will be enough to pay for municipal acquisition of most of the worst urban slum areas. It proposes raising this amount by a tax levy not to exceed 10 cents on each \$100 of taxable property over the next five years. Since the city-acquired land will be sold for private rebuilding, a good deal of the cash outlay will come back. An additional return will come from the increase in assessed value of the rebuilt areas; no tax exemption for new development is sought.

Confident that the municipal power of eminent domain will be enough to energize private enterprise to go to work on rebuilding, the planners see no need for the bolster of federal subsidy or credit. They recommend that the city "advertise the land for sale, and accept the highest and best bid, taking into account the size and character of the improvements to be made by the bidder and his ability to carry out the desired redevelopment."

The bill to be introduced in the Indiana legislature next month calls for:

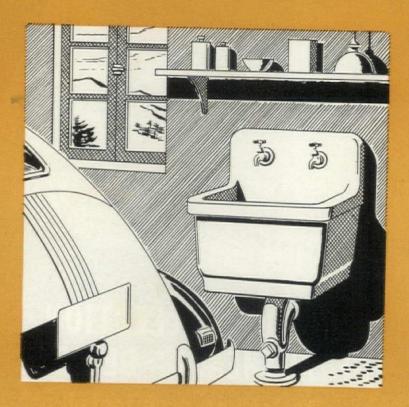
Creation of a redevelopment district with power to levy taxes, but not to issue

bonds.

Establishment of a redevelopment commission with power to acquire land, re-sell it to private builders, and turn over any portion of it for parks or other public purposes. Commissioners would be appointed for one-year terms by a board of trustees, would get no salary.

(Continued on page 20)

ELJER PLUMBING FIXTURES







Suggestion = Acceptance

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There's real need for an ELJER service sink in many of your garage plans for tomorrow's new homes. It is an important suggestion which should bring ready acceptance from your clients.

Installing such a fixture provides handy access to water facilities for outdoor use. By establishing a convenient point of "cleaning up" after home maintenance chores, the service sink also excludes much dirt and grime from the equipment and furnishings of the regular bathroom, kitchen or downstairs washroom.

Merchant builders, too, will benefit through accelerated sales by offering this convenience to home buyers.

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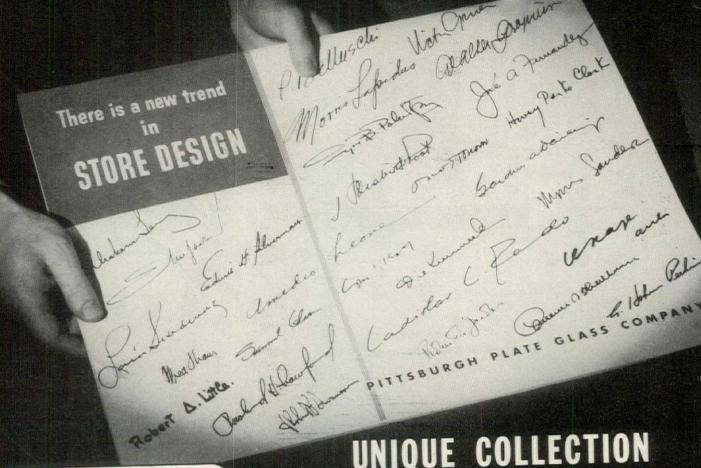


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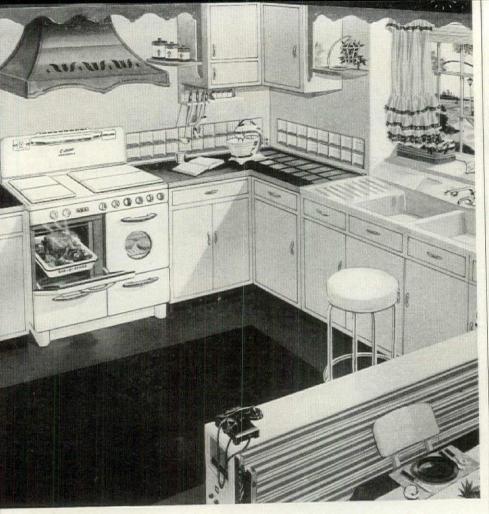


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MONTH IN BUILDING

(Continued from page 16)

Approval from the city plan commission of any redevelopment project.

The Indianapolis Postwar Planning Committee formulated its redevelopment plan after careful study of two slum neighborhoods, for which the city plan commission and park department have prepared rebuilding plans. The Committee's studies show that land in these areas could be acquired for an average of 25 cents a square foot.

In his New York office, builder Albert (Bob) Rheinstein, who could easily detect a familiar pattern, looked out his office window toward the West with a new glint in his eye.

NEWS NOTES

Super Service Stations. The postwar gas station may go the way the U. S. drug store has gone, according to Ethyl Corp., which sees the future service station burgeoning with merchandise ranging from a refrigerator to an aspirin tablet. War gas shortages have already put a lot of strange wares on gas venders' shelves, and Ethyl thinks a lot of them will want to go on selling more than gasoline. Two major oil companies, Ethyl News says, "are planning to handle such heavy items as refrigerators, stoves, ironers, console radios, and washing machines. These will be warehoused by the companies, and delivered in company trucks to dealers for display and sale." Ethyl does not seem altogether happy about all this efflorescence. "It is an indication that the oil market is moving along toward maturity," observes the News, hinting gloomily that narrower oil price margins will speed the emergence of the gas station as an all-around emporium.

Production for Churchill Villa. Britain will be able to turn an almost-finished aircraft plant in North Wales to production of the prefab house expected to shelter a half-million Britishers (see Arch Forum, June, '44). Steel frames for the government house will soon roll from the giant presses of this \$4 million plant, no longer needed for war production.

Rent Fight Turnabout. In Brooklyn 27 tenants went to court to fight a rent reduction. The apartment hotel landlord said he wanted to cut rents, withdraw maid, linen and laundry service. Said the tenants: money was a lot easier to come by than maids, linen, and laundries. Said the perplexed Office of Price Administration: it had no prece-

(Continued on page 24)

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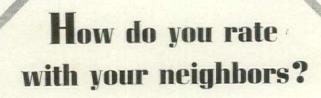
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any upholstered piece. Put the brightest, lightest shades where seating gets the hardest use, the heaviest traffic.

You can do it with Velon-Firestone's new wonder fabric, the completely new, utterly different kind of upholstery and decorative material.

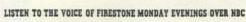
Velon makes every color possible, any color practical-from the palest of pastel tints to the deepest of dark tones, in an infinite variety of weaves and patterns.

No matter what the color, Velon comes back new-clean and bright at a mere wipe with a damp cloth or cleaning fluid. Grease won't hold. Dust can't cling. Water won't absorb. Nothing can stain lutely can not fade.

Velon is virtually everlasting. That's been proved by years of use in the upholstery of thousands of car, plane, and train seats. Not one of these Velon seats has ever needed to be replaced, or lost its original, colorful, bright-new beauty.

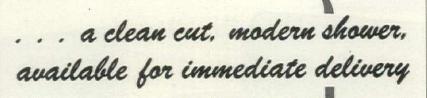
You can't afford to pass up the limitless possibilities of this amazing, new, entirely different material. Unfortunately you can't have Velon quite yet-it all goes to the armed forces. But be sure to include Velon in your postwar planning.

P.S. For completely modern seating use Foamex cushioning, Firestone's rubber



ANOTHER CONTRIBUTION TO A BETTER WAY OF LIFE by





FIAT

SIZES: 32x32x75 and 30x30x75.

WALLS: Tempered, hard pressed treated fiberboard coated on both sides with waterproof baked-on-enamel. Standard color, gray. White on special order. Frame, all steel, including front stiles and threshold. All exposed metal parts finished smooth.

RECEPTÓR: Pre-cast reinforced cement. Non-slip, leak-proof, sanitary. Drain cast integral with receptor.

• This type of shower is very popular because of its economy in first cost and ease and speed in erecting. Thousands of Volunteers have been installed with complete satisfaction to users. Many wartime installations of these Volunteer cabinets have been in constant

daily use for over two years; a severe test of quality of materials and waterproof construction. Not a single instance where dissatisfaction has resulted due to defects of construction or breakdown in materials has been reported.

The Volunteer represents a most successful shower cabinet of unusual value to the user and a profitable item to plumbers and plumbing jobbers.

FIAT METAL MANUFACTURING CO.

1205 Roscoe St., Chicago 13, Illinois

21-45 Borden Ave., Long Island City 1, N. Y. • 32 So. San Gabriel Blvd., Pasadena 8, Calif.

MONTH IN BUILDING

(Continued from page 20)

dent for dealing with a landlord who wanted to reduce rents.

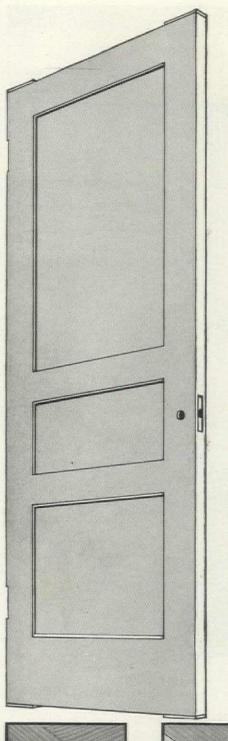
Psychiatrists Point to Slums. A new index of the relation between slum living and health showed in the records of the Boston Armed Forces Induction Station. Three Army doctors reported that examination of selectees showed a higher incidence of mental disorder among men who come from slum homes. Of 6,250 men from desirable neighborhoods, the Army rejected 7 per cent for "major psychiatric causes." Of 6,750 men from poor neighborhoods, 16 per cent were rejected for the same reason.

Collaboration Contractors. The men who built the framework for Holland's occupation now face special tribunals dealing with "economic offenses," the Netherlands Information Bureau said. Many of the Dutch contractors who built airfields and concentration camps for the Germans plead that they were forced to work for the enemy. But hundreds of builders refused to take Nazi money. In two cities such builders have organized a new Union of Building Contractors, excluding all those with a collaborationist record.

Farmers Uprooted? When the Army began its big land buying in 1941, the federal government worried about what would happen to the small farmers displaced by the purchases. The Missouri Defense Relocation Association was created, and 57,000 acres of farm land purchased as a place where the farmers might get re-established. But the farmers were not enthusiastic about relocation. Only 42 farmers asked for a place in the Missouri project, Floyd Pearman, manager of the Relocation Association said. Most just hung around their old homes, went to work in the businesses that mushroomed around the Army camps. Last month 13,000 acres of the Relocation tract went on the market; more will soon be sold.

British Real Estate Boom. With property prices zooming and speculative buying on the increase, the British Parliament is expected soon to move for control of the prices of small houses. Tenants have been offered as much as \$2,000 cash to move out so that their houses may be sold, the London Daily Mail reports.

NAREB on Negroes. Continuing its efforts to alert the housebuilding business to the possibilities of the Negro housing market (see Arch Forum, (Continued on page 28)

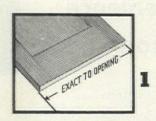


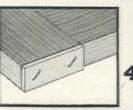
Durable Douglas Fir Doors now offer features that assure a more satisfactory installation -- every time!

Even an inexperienced carpenter can hang a FACTRI-FIT Douglas fir door — when these durable, attractive, modern doors are specified "FACTRI-FIT" all squaring, mortising and gaining or boring is done at the mill by high-speed, precision tools.

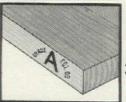
Douglas fir interior doors are available FACTRI-FIT right now for essential war-time building — and the moment war needs lessen they can be used in **all** types of construction.

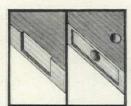
Write for a new catalog showing the complete line of Douglas fir interior doors, Tru-Fit Entrance Doors and new specialty items. And remember—the modern trend in building demands that you specify Douglas Fir Doors "FACTRIFIT". The slight additional cost of this complete machining is more than offset by savings on the job.





Douglas 1





Remember!
NATURE MAKES
DOUGLAS FIR
Durable.

Durable Douglas Fir Doors are made from all-hear's wood.vertical-grain.soft. old-growth Douglas Fir.

FIR DOOR INSTITUTE

Tacoma 2, Washington

THE NATIONAL ASSOCIATION OF FIR DOOR MANUFACTURERS

FACURU-EUT

FEATURES

FACTRI-FIT doors are pre-fit at the mill, trimmed to exact size, ready to hang without sawing or fitting.

2

FACTRI-FIT doors may be ordered completely machined at your option—gained, bored or mortised by high-speed precision tools.

3

FACTRI-FIT doors (like all Douglas Fir Doors) are edge grade-marked for ease in ordering, specifying and supplying.

4

FACTRI-FIT doors are scuffstripped to protect the precision-cut corners during handling and shipping.

NOTICE: Douglas Fir Interior Doors

- are manufactured three ways: 1—STANDARD—Purposely made oversize for fitting to inexact openings.
- openings.

 2—PRE-FIT Trimmed to sixe, ready to hang.
- ready to hang.
 3—FACTRI-FIT Prefit, gained, and bored or mortised.



NEW bathroom convenience requires fixtures and fittings of the most practical modern design coupled with recognized quality—to fit in with the Architect's foresighted provision for beauty, comfort, freedom of movement, and orderly, handy storage of all the "movables."

The bathroom illustrated has the new Kohler Gramercy lavatory with roomy shelf back and built-in fittings. The Cosmopolitan recess bench bath is equipped with a shower controlled by the Triton mixer, latest and most advanced device for

controlling water flow and temperature. The closecoupled Wellworth closet is good looking, superbly practical, yet moderately priced.

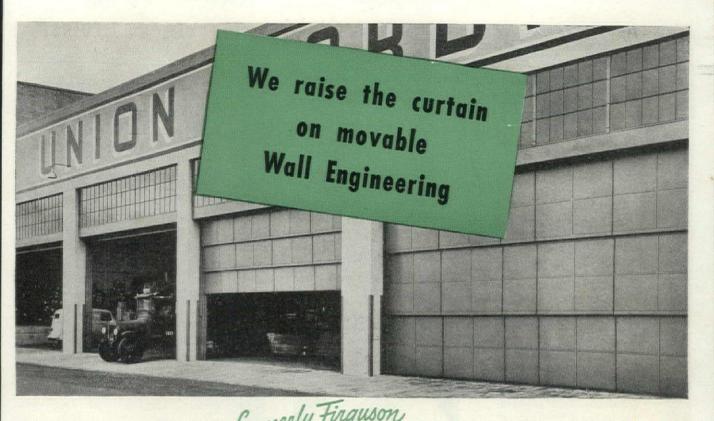
Kohler quality, backed by 72 years of manufacturing experience, is unfailingly maintained because all Kohler fixtures are manufactured at one point, where unity of supervision is constant and complete.

Kohler will gladly provide information on fixtures and fittings now available. Write: Kohler Co., Dept. AF-2, Kohler, Wisconsin. Established 1873.

KOHLER OF KOHLER

BUY AND KEEP U. S. WAR BONDS

PLUMBING FIXTURES AND FITTINGS . HEATING EQUIPMENT . ELECTRIC PLANTS



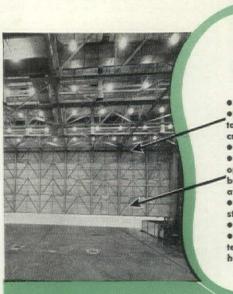
Robertson Vertical Lift Door

How big shall doors be? How fast must a wall open? Modern buildings present these questions more and more.

To all practical purposes the Robertson Vertical Lift Door is unlimited in height and width. And, regardless of how many leaves high, it can be made to open completely in a matter of seconds. The doors shown, open in 17 seconds.

The door nests directly above the door opening, either inside or outside the truss. Overhead equipment can be built right out to the end truss.

This is the fully counterbalanced door originated under the name Firguson. The original engineering skill is now teamed with Robertson. Robertson engineers will be glad to co-operate in adapting this Vertical Lift Door to your requirements. Architecturally it is capable of great variety; any surface materials and treatments. Its many special features can be engineered to fit into your specifications. A Robertson representative can furnish complete information, or you can write for Door literature.



QUICK FACTS

- Any height. Any width. Can be opened in seconds.
 Maximum floor and ceiling area of building retained: overhead equipment—lights, monorall, cranes, etc.—can come up to door.
- Not obstructed by sand or snowdrifts.
- Fully counterbalanced: electrically or manually operated. All leaves reach peak at same time. May
 be stopped at any point, saving heat. Safety device available to halt descent if door touches an object.
- Door may be divided into independent sections,
- still leaving an unobstructed opening.
- · Lowest leaf can conform to ground slope.
- Skin may be of various materials to suit architectural design: fenestration, sliding pilot doors, heat and sound insulation available.



2403 Farmers Bank Building, Pittsburgh, Penna.
Offices in
45 Principal Cities Building Service

27

Treated Wood, YES



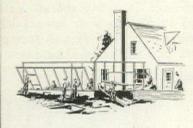
Wolmanized Lumber* is a building material that has a positive answer to the service-life question. It's alloyed for protection against rot and termites.

Pressure Treated, CERTAINLY

The Wolman Salts* preservative is deep in the wood, not just on the surface. Only pressure treatment in closed steel retorts can drive it there.



OF BUILDING WITH Wood



Build with Wolmanized Lumber and get all of wood's advantages: lightness, strength, resilience, insulating value, paintability—plus endurance that insures your investment.



1647 McCORMICK BUILDING, CHICAGO 4, ILLINOIS

MONTH IN BUILDING

(Continued from page 24)

July, '44), the National Association of Real Estate Boards reports that a survey of its members endorses the Negro home buyer and renter as "a good economic risk." A majority of realtor replies underlined a fairly well-established opinion: not race but economic circumstance is the determining factor in care of property and regularity of payments. Most realtors with Negro housing experience said that life insurance companies would find mortgages on well-managed Negro-occupied properties a sound investment.

Union Boost. Design engineers transferred by General Motors from salaries to hourly wage rates because they joined a union must be re-instated on a professional basis, according to a National Labor Relations Board ruling. This represents a major victory for CIO's Federation of Architects, Engineers, Chemists and Technicians, whose membership has been rapidly growing throughout the war years.

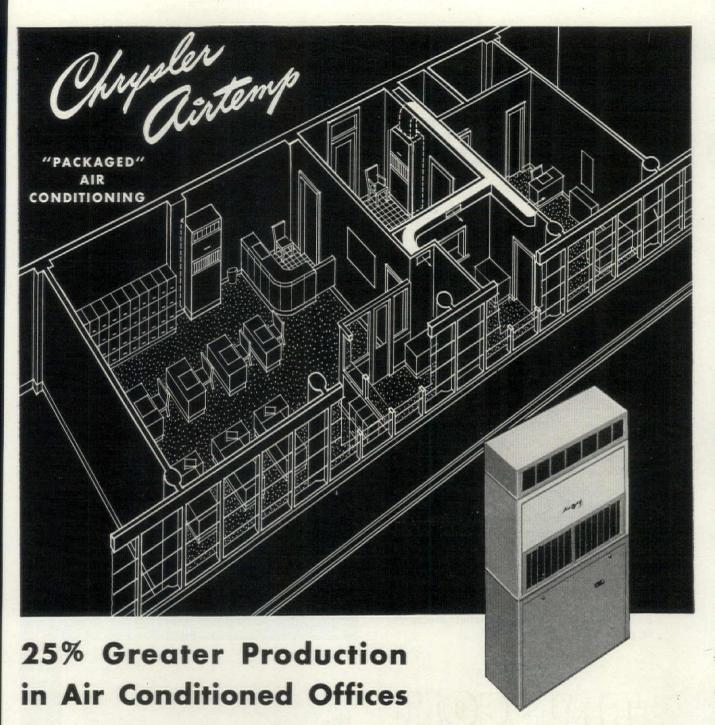
Running Start. The energetic St. Louis Builders' Guild has set aside the first two weeks in February for updating all interested housebuilders on the new techniques which war emergency building has brought to birth. Offered with help from the Producers' Council, the builders' forum will cover prefabrication, uses of plastics, air conditioning, heating and ventilating, new methods of planning and financing.

WAR BOOM INDEX

Bremerton, Wash., home of a busy navy yard, now has five times as many citizens to look after as it did in 1940. At the year's end, the Mayor took a measure of how much the municipal job has grown over the war years. Footprint of the war boom in Bremerton, the Mayor's chart is also an index of the growing pains of many another war-swollen community:

war-swollen commu	mity.	
	1940	1944
Population	15,134	80,000
Property		
values \$4,9	61,423	\$7,667,149
Police	12	50
Firemen	10	72
Other city employe	s 70	327
Births	637	2,396*
Deaths	156	291
Housing authority		
units	none	6,246
School enrollment	3,553	8,035
Bank		
clearings \$12.0	000.000	\$30,000,000*

Bus passengers 658,758 10,967.990*



Increased efficiency—through air conditioning—has been possible in all types of offices. For example, in drafting rooms, where it has been possible to measure efficiency, air conditioning has increased production by more than twenty-five per cent. Chrysler Airtemp pioneered "Packaged" air conditioning which is particularly suited to this type of application. Flexible and easy to

install, either singly or in multiple, Chrysler Airtemp hermetically sealed units provide timetested, dependable, trouble-free temperature-humidity control. Plan now to increase production in your clients' and your own offices. Turn to Chrysler Airtemp next time you make estimates on remodeling or modernization. • Airtemp Division of Chrysler Corporation, Dayton 1, Ohio.

Buy More War Bonds! Tune in Major Bowes every Thursday, CBS., 9 p.m., E.W.T.



SALUTE TO AUSTIN

for modern engineering masterpieces!



 Monuments to Austin Company design and engineering skill rise against the skyline around the entire world.

Truscon Steel Building Products and production facilities have helped Austin attain distinctive design and construction efficiency in thousands of these structures. A few of the most recent and modern Austin masterpieces are shown here.

Austin resourcefulness is meeting many urgent wartime construction problems today, and will meet the urgencies for a wide range, of new commercial and industrial structures in peacetime tomorrow.



Subsidiary of Republic Steel Corporation



ূTruscon Steel Hangar Doors in large midwestern bomber ু assembly plant.



Truscon Commercial Projected Steel Windows in the Hygrade Sylvania Corp. office building, Danvers, Mass.



Truscon Ferroglas construction in large southwestern bomber assembly plant.



Truscon Pivoted Steel Windows in office, Pivoted Steel Windows in factory, and Open-Truss Steel Joists in Sanders
Tri-Cleaning Co. plant, Detroit, Mich.



Truscon Commercial Projected Steel Windows in office, Pivoted Steel Windows in factory, and Open-Truss Steel Joists in Progressive Welder Co. plant, Detroit, Mich.

THREE MEN ON AN



—they all agree on Dust-Stop* Air Filters!

When the man who engineered the system—the man who specified it and—the man responsible for keeping it operating at high efficiency, continue to give Dust-Stops their enthusiastic approval, year after year—it's evidence of a preference worth investigating.

The Architect

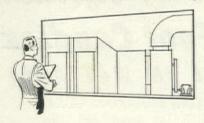
with an eye to original cost and upkeep, bases his preference on cost records. They show that his clients are obtaining the advantages of efficient air filtering at a low initial cost and at low upkeep cost.



The Heating and Ventilating Engineer prefers Dust-Stops and the patented

and complete, ready-to-assemble steel cell frames because of their ready adaptability to virtually any system, regardless of the C.F.M. requirements.

The proved efficiency of the Dust-Stop, flexibility of installation, easy access to filters, and the low cost of this part of the system are but a few of the other reasons why so many engineers have standardized on Dust-Stops.

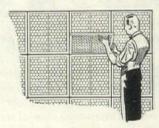


AND the Architect's Client

casts his vote for Dust-Stops because they help him keep his budget down. Maintenance and/or replacement of Dust-Stops in the "L" and "V" frames are accomplished with a minimum of man power and time. There is no storing problem—low-cost replacement Dust-Stops can be quickly obtained from near-by suppliers. And the expense, nuisance and other difficulties of laundering are avoided.

Further proof of the preference for Dust-Stops is their use in factories, commercial buildings, schools and institutions from coast to coast—and their specification by design engineers as component parts of many types of machinery to protect precision parts, increase efficiency or to facilitate operation under adverse conditions.

The Dust-Stop Air Filter is made of packs of glass fibers coated with an adhesive, faced with metal grilles and bound on the edges with a fiberboard frame. The high efficiency of Dust-Stop Air Filters is made possible by the Fiberglas filter medium and the nonodorous, nonevaporating adhesive.



Due to extraordinary wetting power each particle of dust acts as a wick to carry adhesive to other particles. Therefore, the effectiveness of the Dust-Stop is maintained until it becomes heavily loaded with dust.

For complete information and typical installation details for both "L" type and "V" type frame arrangements see Sweet's Files or write: Owens-Corning Fiberglas Corporation, 1830 Nicholas Bldg., Toledo 1, Ohio. In Canada, Fiberglas Canada Ltd., Oshawa, Ontario.





-a FIBERGLAS product

RELIGHTING WITH ARISTOLITES*

Glass-Diffused Fluorescent Lighting ... Modern ... Super-Efficient



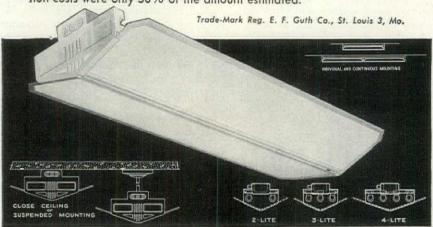
"Lighting Miracle" is Performed!

From 8 to 34 Foot Candles

WITH NO INCREASE IN WATTAGE!

OW as never before, greater and better illumination is available at low cost, with the GUTH ARISTOLITE. The "Before" and "After" photographs show results of modern light-conditioning for the fast-moving, accurate editorial staff of the Pittsburgh Press, Scripps-Howard Newspaper in Pittsburgh, Penn. MORE THAN FOUR TIMES AS MUCH LIGHT is now provided—AND NOT ONE MORE WATT OF CURRENT IS REQUIRED!

In commenting on this job, the Graybar Electric Co., of Pittsburgh, who engineered the installation, said "Management is very well pleased. Like the lighting results, and the fixture construction. Installation costs were only 50% of the amount estimated."



Fluorescent Aristocrat
Installed in the Offices
of The Pittsburgh, Pa.
Pittsburgh, Pa.

"BEFORE" W



INSTALLATION DATA

Fixtures are mounted on 9' 0'' x 10' centers, and are dropped 2' 0'' from the 12' 0'' ceiling. The old Prismatic-Glass Fixtures used 200-watt lamps, produced 8 foot-candles. The new GUTH ARISTOLITES, with four 40-watt white fluorescent lamps, deliver 34 foot-candles. Same wattage for each installation.



FOR PRIVATE OFFICES, TOO!

Three 4—40-watt ARISTOLITES suspended 10' 0'' above floor, and joined end-to-end, provide 40 to 45 foot-candles of diffused illumination on the desk-top. Engineered by Mr. L. D. Lyon, Consumers Power Company; sold by Electric Wholesale Supply Company, both of Jackson, Michigan.

ARISTOLITE DATA

ARISTOLITES are made for 2, 3 or 4 rows of 40-watt lamps. They are 481/8" long; the 2 & 3 light sizes are 121/2" wide, and the 4-lite is 171/2" wide. They can be installed as individual luminaires or in continuous runs; they are for close-ceiling mounting, or can be suspended on hangers. Lighting 1s diffused through efficient, ornamented design glass-shields, which are set at angle to allow loose dirt, bugs and dust to roll-out. Uplight is provided to "Soft-Light" the ceiling. Die panelled, light-windowed endplates complete the ARISTOLITE design.

THE EDWIN F. GUTH COMPANY - 2615 WASHINGTON AVE. - ST. LOUIS 3, MO.



A recent survey shows that sixty percent of the people planning to buy new homes want to bring some part of their kitchen equipment with them.

What they are thinking of, largely, are their almost new ranges and refrigerators—well styled, durably blood—styled, durably built, good for years of service.

Until the buy blood—styled—styled, durably blood—styled—sty

When the new homes you build are equipped with modern, all-steel Youngstown Kitchens, these treasured appliances (and any new models that your prospect may prefer) will fit in with complete decorative harmony.

Send for the new Youngstown

"Builder's Kitchen" catalog that tells of successful builder experience with Youngstown Kitchens.

Until the last shot is fired

— buy bonds — give
blood—salvage fats and
paper—work for Victory.
Then do your part to . . .



MULLINS MANUFACTURING CORPORATION

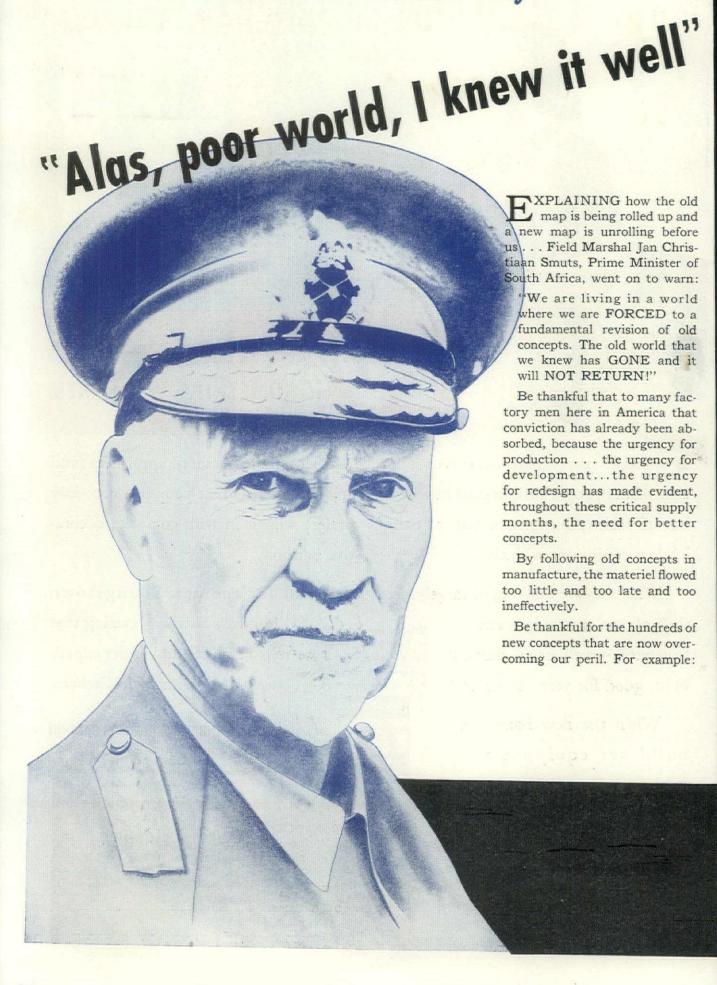
WARREN, OHIO

Design Engineering Service · Large Pressed Metal Parts
Porcelain Enameled Products

Houngstown Kitchens.
by Mullins

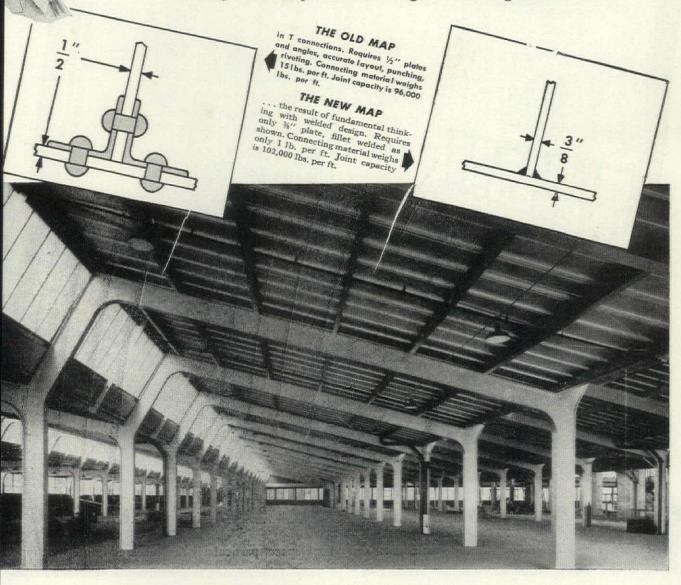
Mullins Mfg. Co	orp., Dept. AF-245, Was	rren, Ohio
Please send me	e Builder's Kitchen"	
Name		
Street		

then he said to himself



"A New Map is Unrolling," he says

LOOK, MARSHAL SMUTS, how fundamental thinking is revising old concepts in the design of building structures:



The rigid frame building shown above illustrates the improved appearance and greater utility made possible by welded design. Fabrication and erection costs were 10% less than for conventional construction.

The Lincoln Engineer nearby will gladly help you revise old concepts with Arc Welding.

THE LINCOLN ELECTRIC COMPANY, CLEVELAND 1, OHIO

ARC WELDING



FOR TODAY'S BUILDINGS AS WELL AS TOMORROW'S

Convection heating is modern heating—as modern as the buildings you're designing. Whether actual construction is to begin immediately, or after the war is won—you can write Modine Copper Convectors into the specifications *right now!*

Modines not only are modern—they look modern. Streamlined in design, for simplicity...with a new beauty of line and proportion...Modine enclosures are unobtrusively attractive...entirely in harmony with any style of interior. And Modine Convectors save

floor space, particularly the recessed-in-the-wall type.

Convection heating is most flexible. With their compactness, high conductivity, and directed air flow, Modine Copper Convectors are more quickly responsive to automatic controls. Heating is faster, more even, most economical.

For Details get Modine Catalog SA-44 Filed in Sweet's

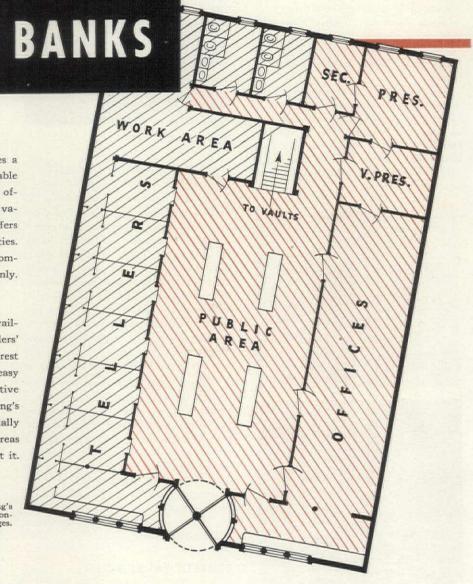


Look in your phone book for Modine representative's name—"Where to Buy It" section



MODINE MANUFACTURING COMPANY . 1736 RACINE STREET, RACINE, WISCONSIN

We suggest these floors for



Linotile (Oil-Bonded) provides a distinctive, exceptionally durable floor for all public areas and offices.* Available today in a variety of colors and sizes, it offers unlimited design possibilities. Armstrong's Linotile is recommended for suspended floors only.

Standard Asphalt Tile, also available today, is ideal for tellers' cages*, work areas, and rest rooms. This low-cost floor is easy to clean and keeps its attractive appearance for years. Armstrong's Asphalt Tile is also especially suited for below-grade vault areas because moisture won't affect it.

*When they are available, Armstrong's Cork and Rubber Tile may be con-sidered for offices and tellers' cages.

For full information about the complete line of Armstrong's Resilient Tile Floors—including Armstrong's Greaseproof Asphalt Tile, Industrial Asphalt Tile, and Conductive Asphalt Tile—and Armstrong's Safety Floor Coating, a new non-slip ramp covering-consult Sweet's Architectural File or write to Armstrong Cork Company, Resilient Tile Floors Department, 2302 Duke Street, Lancaster, Pennsylvania.



ARMSTRONG'S RESILIENT TILE FLOORS

ARMSTRONG'S CORK TILE AND RUBBER TILE CURRENTLY ARE NOT AVAILABLE

LETTERS

Letter from Iceland . . . Competitions: a problem for the serviceman . . . Allen Rides Again . . . Life-Forum house ideas stand up under a beating . . . Criticism of commercial remodeling.

LETTER FROM ICELAND

Forum:

I am enclosing several pictures I took when in Reykjavik, Iceland. Actually they are no more than photographic "notes," but they show several features which might be of interest to Forum readers.

The most startling thing to me was the immense size of windows used—not only large in proportion to the wall area, but in pane size as well. This in spite of their cold weather and almost total lack of sunshine. As can be seen, most of the panes are fixed and only small sections open for ventilation.





Icelandic window treatment

A great number of the buildings are heated by the famous Icelandic hot springs, the water being piped a number of miles to the city and there distributed by branches.

These springs were relatively unused for years, but their commercial possibilities are now being rapidly exploited for heating houses, greenhouses, laundries,



Small apartment houses

etc. Plans are under way for greatly increasing this utilization after the war.

The new architecture in general reflects some Scandinavian influence, but more than that, I would say, Germanic. To date it is certainly not brilliant building, but it has points worthy of attention—particularly the proven practicality of large windows in the sunless and chilly north. Although on a parallel with central Norway, Sweden and Finland, the climate, summer and winter, is far more dour. When I took the pictures, although it was in August, I enjoyed the first real sunshine for ten days running.

Besides creating a less severe approach from a design point of view, I would say that a more liberal use of gay colors, especially yellow and good reds, etc., would be helpful in overcoming a certain gray dryness that seems to prevail. There are virtually no trees in the entire city of Reykjavik, and little other greenery, so that "warmth" must be supplied by man. . . .

G. E. KIDDER SMITH

Washington, D. C.

COMPETITIONS BY V-MAIL

Forum:

I have read Mrs. Klate's letter in the November issue and wish to second her motion for greater opportunities for aspiring young architects to obtain experience and recognition. It is encouraging to note that you anticipate architectural competitions in the near future, but unless several important changes are introduced in the usual method of conducting them, the stated objective cannot be obtained. A very large percentage of the younger men and women with architectural training are now stationed outside the continental U.S. As I am one of these I can speak from personal experience. I receive my magazine at least two or three weeks later than when I

lived on the mainland. If there is an announcement of a competition it is impossible to send for the program and receive it in time to have my entry in the mail by the specific date, not to mention the fact that it should be allowed at least two weeks extra to make sure it arrives on time for the judging. I am sure there must be many others who have experienced similar disappointments. War-time jobs require more work hours per week and consequently less time to devote to such so-called nonessential activities. In spite of this fact. or perhaps because of it, it is even more necessary than ever to keep alive and kindle every spark of talent the profession can muster. It will be sorely needed in the postwar challenge that lies ahead.

Your publication can perform an important service in this respect, and to that end I wish to offer several constructive suggestions for future competitions:

1. The time allowed between the announcement date and the deadline date should be considerably extended.

2. The complete program of all competitions should be printed simultaneously with the announcement.

3. Subscribers who live outside the continental U. S. who express a desire for such service should have complete programs of all competitions mailed by first class mail, or in the case of service personnel, by V-mail.

4. In order to avoid delay in the judging date, the deadline mailing date should be set two weeks in advance for all off-the-continent entries. . . .

NORRIS M. GADDIS

Honolulu, T. H.

CLASSIFUNCT

Forum:

The burning question, "What will postwar architecture be like?" has temporarily burned down to a mess of clinkers in consequence of my making quite a few speeches on this subject. Of course, others, including H. Myers, have been making speeches, very nice too, on this subject and I notice speeches are far more effective than printed articles in impressing the public. This is due to the operation of the well-known Ginsberg law of physics, meaning the triumph of lungs over literature.

Temporarily, then, the question of "What will postwar architecture be like?" has been replaced by an even

(Continued on page 40)

Your Customers are saying:

Five years ago, we installed your Upson Ceiling in several rooms and stairway as our plastered ceilings were cracked and unsightly. Our Upson Ceilings look beautiful and are and unsightly. Our Upson Ceilings look beautiful and are and unsightly as when they were installed. They have as good today as when they were installed of the usual required no attention or repairs outside of the usual required no attention or repairs outside of the usual required no attention or repairs.

G. D.*

Woonsocket, R. I.

Sept. 5, 1944

When I built my home 25 years ago, I used Upson Panels in living room, back hall and bathroom. They were so satisfactory that I used them again six years ago when I put bathroom that I used them again six years ago when I am now planning tory that I own. I am now planning tory that I own a lam now planning tory that I own. I am now planning to the mountains in North Carolina and expect to a house in the mountains in North Carolina and expect to give your Panels again.

F. W. P.*

I providence, R. I.

Sept. 1, 1944

Three years have elapsed since
Upson Strong-Bilt Panels were
installed throughout our new
installed throughout our new
home. It is with great satisfaction that I say we have no
faction that I say we have no
cracks in our walls and ceilcracks in our walls and ceilings. Upson Panels have added to
ings. Upson Panels have added to
the warmth and artistic appearthe warmth and artistic appearance of our home by making each
ance of our home by making each
room a better one to live in.

Oct. 31, 1944

Mrs. E. D. L. Mountainside, N. J.

*Name on request.



In the universal satisfaction of Upson customers everywhere is *proof* of the quality and beauty you want in products for postwar jobs.

In a recent nation-wide survey is *proof* that you can depend upon the installation of Upson Ceilings for an important part of your postwar income. This survey reveals that:

Two out of every three homes today have cracked walls and ceilings.

And that one home owner in every four is planning cracked plaster repair work just as soon as it can be started.

What other type of job will you have a chance to sell

to one out of every four homes? Application is extremely simple and profitable. The time to investigate and prepare yourself is *now!* Consult your lumber dealer or write us for details on how you can begin. The Upson Company, Lockport, New York.

Upson Quality Products Are Easily Identified
By The Famous <u>Blue-</u>Center

UPSON

PACEMAKER IN CRACKPROOF PANELS



The Optonic Color System is based on the newly developed science of using color FUNCTIONALLY in industrial painting — to improve production, safety conditions, and employee morale. It is fully described in a new book — "Color Power for Industry." A note on your business letterhead will bring you a copy with our compliments.

THE ARCO COMPANY
CLEVELAND, OHIO . LOS ANGELES, CALIF.



LETTERS

(Continued from page 38)

tenser query: "What will the postwar architect be like?"

In my opinion, and gentlemen, I say this advisedly, the postwar architect will be one-story high with no dining room.

This will be the greatest forward step the profession has yet taken. With no dining room the architect will be financially independent as it is a well-known fact that the hardest task facing a young architect is to cultivate an allergy to food. In regard to the one-story part of it there is some dispute: my own feeling is that a two-story architect has the advantage. This gives him one story before the bids are opened and another one afterwards.

Let us descend, however, from the general to the particular. Let us face up the question, "What will the 20th century, or contemporary, Allen be like?" This is a question which, no doubt by a mere oversight, no one has troubled to ask and so it gives me great pleasure to answer it.

In an interview with myself in which I twice detected myself trying to turn off my earphone to avoid hearing embarrassing questions, a caddish trick indeed, I find that I have become a Classifunct. A Classifunct is a man who has been converted to functionalism but who occasionally backslides into a nostalgic admiration for classicism. I have decided that my theory that functionalism would, if we just looked the other way, become defunctionalism is incorrect. I have taken my banner reading "Back to Baroque" and presented it to the East Grand Rapids Yacht Club, who hoist it as a signal to the initiated that there is something in the cocktail shaker besides aluminum.

How did this transformation occur? I blame Mr. George Fred Keck and Mr. William Wilson Wurster. Mr. Keck's Solar houses appeal to me so greatly that I find myself occasionally referring to more traditional houses as Lunar houses, as they look as if they had been designed by somebody who was moonstruck. And a study of Mr. Wurster's work inspires me with a desire to dye my hair, assume the standard collegiate costume consisting of non-matching pants and coat and no hat and enroll in his classes.

It will be useless for Messrs. Keck and Wurster to issue pained repudiations of my discipleship as my mind is made up and I have no time, before the poker game starts down cellar, to go back upstairs and make it up all over again.

ROGER ALLEN

Grand Rapids, Mich.

NEST OF PESTHOLES?

Forum:

In the November issue you gaily mention how your *Life* editors went to bat, about 38 of them, and devised ways to improve the modern home.

These you publish for the edification and instruction of architects and all your other readers. You have the ink and the paper and we subscribers have to take it . . . I'd rather see an editor do that "bottle and salt shaker trick."

The Storagewall effort has some merit. But I fail to see where your Storagewall has "adapter panels" alow and aloft to fit other than 8 ft. ceiling heights. Indeed, I fail to see how it is going to be fitted even to the 8 ft. ceiling! i.e. After the house is built!

Then I think back to where I got my own ideas on the same subject: my "Grosspop" 50 or more years agone, had just such a layout of his own devising and it really worked. Eight cupboards in a row on one end of the big general room, to handle skates, bats, overclothes, etc., for four boys and six girls and a bull-fiddle. Since panel doors were cheaper than veneers the cupboard front was old-fashioned. "Pop" was no architect however, or an editor, but his 1880 idea was 1945—and time proved it good, long before these young squirts.

Then we look at your Convertible Bedroom. Did the editors have fun with that one! One new device only in that collapsible partition which found a place in my Unit Homes—six years ago.

The rest of the design! Did any of these editors ever try their hands at making up a bed? Cleaning the dirt out from under a bed-size space only 1 in. high above floor? Or "houseclean" all the gadgetry, especially that washbowl under it's polished glass lid? Then, with floor space enough to twist around, how do you all figure that either boy or girl with a guest could "cut a rug" to the radio?

Then we come to the In-Line Bath. "Yuss! Them editors sure can design and handle language, allright!"

This is one side wall of the bedroom. If the model is that Hornbostel Kid, good enough. But again we seen the modern designer reverting back to Civil War days. The editors are all too young to know anything about what we have pain-

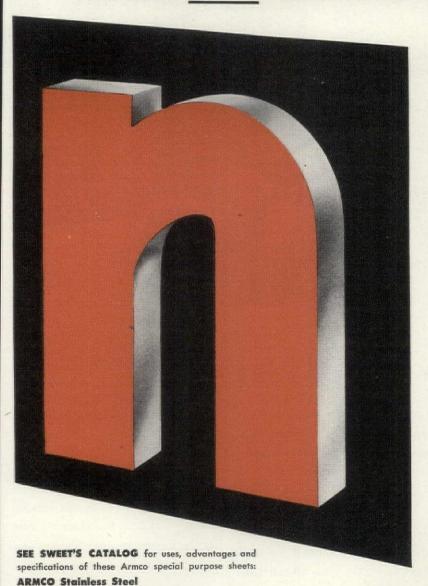
(Continued on page 44)

Since January 1, 1943, TIME, LIFE, FORTUNE and THE ARCHITECTURAL FORUM have been cooperating with the War Production Board on conservation of paper. During the year 1944, these four publications used 73,000,000 lb. (1,450 freight carloads) less paper than in 1942. In view of the resulting shortage of copies, please share your copy of the FORUM with friends.



THESE MODERN SIGN MATERIALS

SUGGEST OTHER INTERESTING ARCHITECTURAL USES



Few structural materials harmonize and complement each other so well as porcelain enamel and stainless steel.

These inlay sign letters illustrate the point. The face is rich, colorful porcelain enamel (on ARMCO Enameling Iron) and the side flanges are ARMCO Stainless Steel.

Consider the features of this combination in the light of other possible architectural uses . . . the 3-dimensional effect for sustained attention-power . . . rich color with bright metal for high visibility . . . exceptional ease of cleaning (stainless steel and porcelain enamel are as smooth as glass) . . . and, finally, surfaces that no weather can blemish or corrode.

Think how well these two architectural materials can be used to create unusual new effects for storefronts, theaters, restaurants and other structures that must appeal to the public to gain trade. You can be sure of long, satisfactory service for your clients by specifying ARMCO Stainless Steel and ARMCO Enameling Iron. . . . The American Rolling Mill Company, 351 Curtis Street, Middletown, Ohio.

EXPORT: THE ARMCO INTERNATIONAL CORPORATION



HELP FINISH THE FIGHT-WITH WAR BONDS

ARMCO Enameling Iron
Galvanized ARMCO Ingot Iron
ARMCO Galvanized PAINTGRIP STEEL
(also supplied with an ARMCO Ingot Iron base, or Copper-bearing Steel)

SPECIAL PURPOSE SHEET STEELS FOR TOMORROW'S BUILDINGS



...and what are they PREPARED to do

The factories of the Otis Elevator Company have been devoted one hundred per cent to the war effort. That's not unique. That's the pattern of American industry.

however ...

In addition to our large scale production of a great variety of highly precise mechanisms of war for the Army, Navy, and the Air Corps, we have continued to produce elevators. We have manufactured freight as well as passenger elevators for hospitals, ordnance depots, naval warehouses, and other priority installations.

fhis means ...

Although our facilities, organization, and resources have enlisted for the duration and have gone all out for war production as a matter of actual fact we have never been out of the business of manufacturing, in-

stalling, and servicing elevators.

and so ...

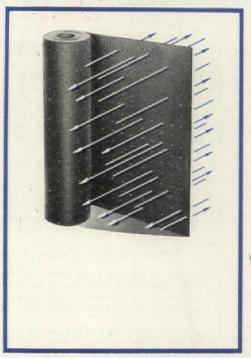
As our war work is reduced or terminated, this company is prepared — with no change in pace, and without missing a stride — to resume furnishing the highest quality elevators and escalators for all peacetime purposes.



OFFICES IN ALL PRINCIPAL CITIES



Men on the job say...



We are using Air-Vent perforated asphalt felt exclusively in the application of our built-up roofs. The big advantage is the elimination of the blisters or air pockets that develop on most asphalt built-up roofs. Our roofers like Air-Vent . . . it adheres to the mopped surface much better than ordinary felt, and once down it stays put. Congratulations on this definite step forward in the built-up roof industry.

The quotation at the left is typical of statements from roofing contractors. They find, from actual experience, Air-Vent* Felt averts many annoying roof failures. The principle is simple. When Air-Vent is laid, air or vapor is forced out through tiny "Outlet" valves. Asphalt seeps in through the "Inlet" valves, giving a better bond. Result: freedom from blister problems... no air bubbles to expand and lift the felt.

Air-Vent*, with its two-way perforations, is an exclusive patented Ruberoid product. The Air-Vent feature is available in both asbestos and asphalt type felts. Write for samples.

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The RUBEROID Co. Executive Offices: 500 Fifth Ave., New York 18, N.Y. ASPHALT AND ASBESTOS BUILDING MATERIALS...THERMAL INSULATIONS





WE MANUFACTURE WE INSTALL WE SERVICE

YOUR ASSURANCE
OF CLIENT SATISFACTION

OVER 2,000,000 SATISFIED CHAMBERLIN USERS

Include Chamberlin Metal Weather Strips in all your home and building specifications. The nationwide Chamberlin organization assumes full responsibility for the satisfaction of every job because the work is expertly installed under close factory-branch supervision by our own factory-trained mechanics. Millions of homes and buildings are now enjoying the comfort, protection and economy of this oldest and best-known weather strip. Proper installation is half the job. Specify Chamberlin because Chamberlin installs it right!

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Call the nearest Chamberlin Byanch for any of these dependable weatherproofing and protection services.

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Formerly Chamberlin Metal Weather Strip Co.

Home Office: 1229 LaBrosse St., Detroit 26, Mich. FACTORY BRANCHES FROM COAST TO COAST

LETTERS

(Continued from page 40)

fully thrown overboard around the turn of this century. City building codes all over, thank God, outlaw the immature dreams of such a nest of pest holes as are here triumphantly exposed to mislead us backward, since we don't seem to have the brains to go forward. "Youall might think a bit about that."

The illustration No. 7, p. 127 makes me shudder. I recall such a hole, pardon, "under-lavatory storage space" in the old Custom House circa 1825 at Erie, Pa., and some very old houses, with the city health authorities coming and ordering the dark, pest-laden, damp and smelly closets torn out. "The poor, ignorant foreigners did not know better." The foot pedal water valves, if exposed fully, could be rewashered by an expert plumber at a price.

Luddy me! My advice to your editors, all 38 of them is simply: "For the luvva Mike! Go hire yourself an architect!"

GEORGE E. EICHENLAUB, Arch. Erie, Pa.

The Forum salutes Eichenlaub's "Grosspop" for his foresightedness, fails to see why our Storagewall won't work if his did, points out that easily serviced pedal valves have been in use for 40 yrs., resents the intimation that inside plumbing must be damp and pestladen, suggests an exterminator. And by the way, Mr. E. all LIFEFORUM ideas are architect-designed—ED.

Forum:

We who condemn some of your articles are just as ready to compliment you on others. Such is the case with the article on the Storagewall as proposed on pages 83 to 93 in the November issue. I think this fills a crying need for more storage space of a more usuable nature. It applies to old houses and new alike and makes the best possible use of the space consumed. I can visualize using it to a good purpose in new houses. The house could be built and sold as a mere shell and the walls purchased and added in much the same way a person now buys and adds furniture. . . .

EDWARD WM. DELAET, Industrial Designer

Dayton, Ohio

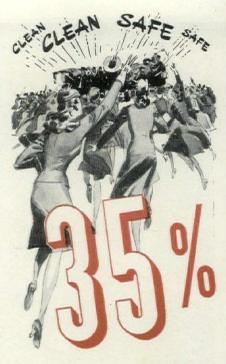
GROWING PAINS

Forum:

I have read the controversy over "cowshed" architecture with a great deal of interest. Here is my "two bits" worth!

First, I married into a family with newspaper traditions. Second, Fate, having dropped me in a small community after traveling up and down the land, I have had to take the chaff with the

(Continued on page 48)



Are Already On The

WATER HEATER BANDWAGON!

That's right! A 1944 survey (made for the National Electrical Manufacturers Association) shows that 35% of today's home owners intend to buy an electric water beater.

And why not? For the electric water heater is

SAFE—Flameless, fumeless CLEAN—Smokeless, sootless FASILY INSTALLED—Requires no flues, vents or lengthy hot water

TROUBLE FREE as electric lights!

Include an electric water heater in every home you build, and you'll be giving home-builders and buyers what they want! You'll be on the bandwagon, too!

pipes.

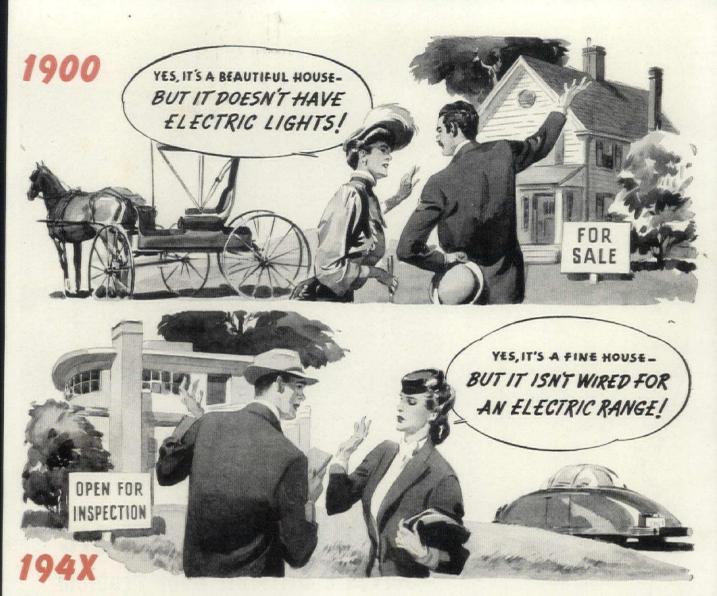
RELECTRIC WATER HEATER SECTION
NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION

CLARK • ELECTROMASTER • FRIGIDAIRE • GENERAL ELECTRIC • HOTPOINT • HOTSTREAM • KELVINATOR • MONARCH • NORGE • PEMCO • REX • RHEEM • SELECTRIC • THERMOGRAY • THERMO-WATT • UNIVERSAL • WESTINGHOUSE

A House Wired For An
ELECTRIC RANGE IS Already



WATER HEATER!



"Ever TRY to sell a woman something she DOESN'T WANT?"

Remember the old saw about "You can lead a horse to water, but you can't make him drink!"? Well, it's the same with women. If a house doesn't have what they want, they won't buy. And women now-a-days want the clean, convenient, safe economy of an electric range.

Here are the Facts!

- In 1941, ten times as many consumers demanded Electric Ranges as in 1933. The trend is rapidly towards Electric Cooking.
- The office of civilian requirements recent survey showed that 2.7 times as many families

wanted an Electric Range as now own one.

- The large and rapidly growing swing to Electric Cooking is also shown in surveys made by HOUSEHOLD MAGAZINE, THE J. WALTER THOMPSON COMPANY, THE CHICAGO TRIBUNE, and others.
- The additional cost of wiring for an Electric Range adds less than 12c a month to payments on a 20-year F. H. A. Loan! Get the details—now! Write for free booklet, "wire AHEAD." Address:

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155 E. 44th Street, New York 17, New York

A-B STOVES . ADMIRAL . ELECTROMASTER . ESTATE . FRIGIDAIRE . GENERAL ELECTRIC . GIBSON

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FOR EASIER SALES

FOR ELECTRIC RANGES





ELECTRIC-EYE MAGICSolves a Difficult Door Problem

In a unique application, half the Stanley Magic Door swings as the other half slides ... Open in unison at approach... Close after passage... Completely automatic... Save time... Eliminate damage

In the Manville-Jenckes Textile Mill at Manville, R. I., the junction of a stairway and trucking passageway posed a problem successfully met by Stanley Magic Door design. The electric-eye actuated mechanism was so arranged that a swinging-sliding door combination opened and closed in smooth unison – the sliding half not obstructing the stairway.

In busy industrial plants, Stanley Magic Doors save dollars daily in speeding parts and packages between departments. No worker time is lost, accidents are reduced, breakage eliminated and door repair cost saved. Include them in your coming building or modernization plans. Stanley will cooperate with you in preparing plans and specifications. Fill out and mail the coupon now.

(STANLEY)



The trade-mark that appears on highest quality Butts, Hinges and other Hardware Equipment for commercial, industrial and residential buildings.

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The Stanley Works,	
	u infor-
Magic Door Div., Magic Door Connecticut New Britain, Connecticut Gentlemen: Please send fu Magic D Mag	poors for
Gentlemen: Please Magic L mation on Stanley Magic L () Commercial () Indus	trial Use.
mation Commercial	**********
Name	***************************************
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Street Sta	te
Cier	

STANLEY MAGIC DOORS

REQUIRE NO HAND TO OPEN

To Architects, Engineers and Heating Contractors

Since 1939, our entire manufacturing facilities have been devoted to the production of essential war materials twenty-four hours every day. As a result the manufacture and sale of boilers has of necessity been

Without relaxing for a moment our vigilance and energy toward restricted to Army and Navy projects. the war effort, an aggressive organization such as ours must plan for after Victory-Day, when production must stay at high levels to assure

Working to this end, we now have proven plans for a completely a prosperous peacetime America. new line of low pressure steel heating boilers for operation on both steam and hot water. These Titusville boilers embody the recognized dependability of all previous Titusville boilers, and in addition, many new developments that make for greater economy and longer trouble-

The new Titusville line provides for 19 sizes, ranging from 1,800 sq. ft. steam hand-fired coal and 2,190 sq. ft. mechanically fired, to free service. 35,000 sq.ft. steam hand-fired coal, and 42,500 sq.ft. mechanically fired.

A descriptive brochure is now in the making and we will be most happy to send one of the first copies from the press for your inspection,

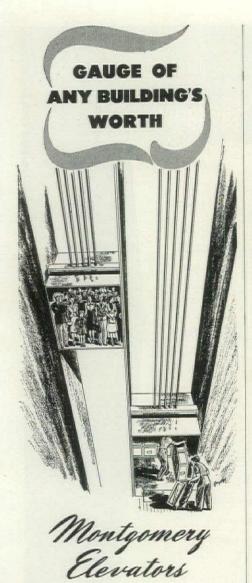
Titusville Boilers will definitely play an important role in post-war heating, and the Titusville organization will welcome the opportunity as soon as available. of working with you now on your heating boiler replacement jobs or new heating projects.

THE TITUSVILLE IRON WORKS COMPANY

Division of STRUTHERS WELLS CORPORATION

President

"Manufacturers of Dependable Heating Boilers Since 1860."



THE ENTIRE OPERATION of any modern commercial or industrial building, more than one story high, depends on the efficiency of its vertical transportation system. In postwar construction and its attendant new elevator problems, you can depend on Montgomery for assistance in designing and engineering vertical transportation. Although their original cost is generally lower, for over 50 years Montgomery Elevators have been giving such dependable service that practically no major repairs have ever been required.

MONTGOMERY MANUFACTURES a complete line of passenger and freight elevators, electric dumbwaiters and special equipment for vertical transportation. If you are planning a specific project, Montgomery Elevator Company invites your elevator problems.



HOME OFFICE • Moline, Illinois Branch Offices and Agents in Principal Cities

LETTERS

(Continued from page 44)

wheat. In the past ten years, I have furnished designs for over a thousand privately constructed dwelling units, and appraised as many more for savings and loan associations.

With this as a background, I can appreciate and understand the editor's point of view in reporting new and interesting work. I believe that the function of a publication such as yours is to reflect changes and trends in the development of architecture. Few will contend that the architecture of today is static. Rather, it is showing signs of a powerful and wholesome growth, so if some of the manifestations appear to be "cowsheds" or "corncribs," I contend that they are the manifestations of adolescence and growing pains.

Rather, I would place the blame for so called "cowshed" architecture at the door of the profession. After years of neglect, the architect is finally grasping for the pot of gold at the end of the housing rainbow, stimulated by fat fees for war housing projects within the past three years. In imitation of the masters, Frank Llovd Wright, Neutra, and Raymond, the architect has suddenly become an evangelist of a new way of life, offering to the public his own conception of how the public should live. Indeed, it is a wholesome influence for growth, but the fallacy of this approach is that perhaps 90 per cent of the people do not live this way, and do not want this kind of house. If you doubt, ask any speculative builder, real estate dealer, lending institution, or better yet, visit them in their homes or do some appraising for a lending institution.

These people are alive to public demand, and until the profession of architecture recognizes this fact, the speculative builder, the prefabricator, the lending institution, and the real estate dealer will continue to take the cream off the housing pot.

The second fallacy is that the profession, as a whole sits over a drawing board and dreams of functional building without the slightest idea of real economy in residential construction or the materials used. Let them learn from the speculative builder, the mechanic, or the plant that fabricates the parts going into residential construction. Rather, the architect must satisfy his ego, his desire to do something startling for publicity purposes, by creating specialized details, using materials in any but a logical fashion, and creating odd angles and effects for the sole purpose of artistic licenses. I venture to say that in twenty years, this period will be dated just like so many other fads that have

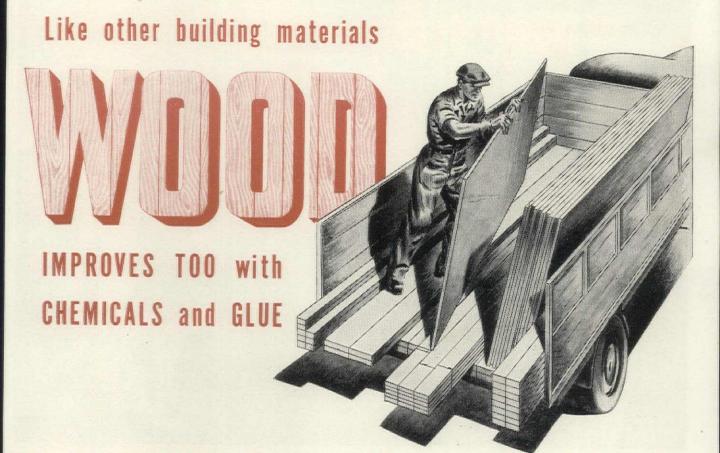
(Continued on page 52)



Water seepages still del ceptances and create doubthe competence of the arm or builder. WASCO of fabric thru-wall flashing elinthis hazard. Three repeller phalt, sheet copper and in nated fabric, unite to finever-failing, time-defying, stop. WASCO is easily shaped to any contour a of installation. Although W costs less, it is a big improviour 16 oz. copper flashin A.I.A. Folder tells why. Misend it?

WASCO Flashing Com 86 Broadway, Cambridge 49

Wasco



There's nothing static about wood, even though it is man's oldest building material. While manufactured materials or substitutes are improved by science as the years go by, modern chemistry helps keep wood abreast, and ahead, of the field!

Today, wood is given longer life through wood preservatives, while it is given new strength, new span, and new usefulness through modern glues, as strong and stronger than the wood itself.

With the natural advantages of friendly warmth and beauty, and with versatility, easy fabrication, and economy all on its side, wood continues a No. 1 favorite building material.

To serve wood better, Monsanto Chemical Company, pioneer producer of modern chemicals for wood protection, and I. F. Laucks, Inc., world's largest manufacturer of industrial glues, today are combining their experience, their research and their talents. You can look here with confidence for the developments that will insure to wood its preferred position as a modern

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1700 South Second Street, St. Louis 4, Mo.



I. F. LAUCKS, INC.

A Subsidiary of Monsam Seattle 4, Wash. Lockport, N. Y. Los Angeles 1, Calif. Portsmouth, Va.

LAUCKS, LTD. Vancouver, B. C. Stanbridge, Que.





How good heating dealers can boost business for you.

The Cape Cod Home shown here, designed especially for us by Royal Barry Wills, A.I.A., of Boston, Mass., is one of a series of architect-designed homes being featured in Timken Silent Automatic advertising to stimulate new home thinking and to encourage people to build better homes.

We know of no better way to give the architectural profession a boost than to feature their work in a group of leading national magazines and newspapers with a combined audience of more than 30 million readers.

Yet this is only one of many ways Timken and Timken Silent Automatic Dealers aid architects—

First, Timken Dealers help the architect select the type and size of heating or winter air conditioning equipment best suited to the individual home. Second, they present heating plans and piping diagrams for the architect's approval. Third, factory-trained mechanics install quality-built Timken Silent Automatic equipment which is backed by 20 years of home heating experience. Last, and important

to both architect and owner, Timken Silent Automatic Dealers provide dependable service after every sale.

Try the Timken Dealer on your next home heating job! Boost your business and profits by using his experience, his complete facilities and the quality equipment he sells.

Timken Dealers are accepting Reservation Orders now, without obligation, to insure earlier delivery of new and improved Timken Silent Automatic Oil Heating Products when wartime restrictions are relaxed.

Silent Automatic

Quality Home Appliances for Comfort, Convenience and Economy. 20 Years of Faithful Service to American Homes.

Division of THE TIMKEN-DETROIT AXLE CO., Detroit 32, Michigan





The remodeling of this prison, located in a southern state, is a good example of the possibilities of rehabilitation work. All cell work, locking devices, railings and gratings were furnished and installed by Stewart. And although the manufacturing facilities of this organization are engaged in war work, our engineering staff is available to work with architects and builders on plans for new construction or remodeling of old equipment for any size project from a village lockup to a federal penitentiary. The Stewart Iron Works Co., Inc., 1177 Stewart Block, Cincinnati 1, Ohio.



A LETTER FROM THE PUBLISHER

Because this issues goes to press just a few days after the January issue went into the mails, it is not possible this month to report any results of the Forum's G. I. Jobs Service. A full, and we trust, encouraging report will appear in this space next month. Meanwhile, we reprint below the original statement of this program.—ED.

Dear Reader:

For a good many months the Forum's staff has been pondering how we might help returning veterans and others shifting from war to peacetime pursuits. Not because we think the war is over, but because in the first place we believe it wise to plan for that day, and in the second place because the armed forces have already returned to civil status almost 11/2 million men. Whether in or out of uniform, many who have been active in some phase of the war effort have become so detached from their prewar work that a return to it is doubtful. Similarly, many of the offices in which they were employed have disthe during appeared drought, leaving no place to which they can return. Again there are thousands of young men who were just ready to enter a building career when war intervened.

As step No. 1 in the Forum's program we are establishing a registery which will work two ways at once. The man returning to peacetime status is invited to register with the Forum, making known his qualifications, the kind of job he wants and the location in which he prefers to work. These statements will be printed without charge in a special classified advertising section of the Forum. At the same time the Forum invites employers seeking professional or executive personnel to make known their requirements. These re-

quests will be classified and the information made available to those qualified. Thus in acting as a clearing house the FORUM hopes to be the means of bringing together the right man and the right job. Further details of the service will be announced in the March issue.

A second service the FORUM will provide is through publication of a simple pamphlet in which the editors will review the major building events of the war years. This pamphlet-Building, War and Postwar-will be sent without charge on request to anyone who has been or still is in war service. Through this simple device the Forum will perform its normal function of informing building professionals of past events and coming trends which may influence their careers. Building, War and Postwar, is now in preparation. Requests to the Forum will be filled as soon as the pamphlet comes from the press.

Our intention is to make our job placement service something more than a cold routine. FORUM offices in New York, Chicago and Cleveland (see phone book) have been instructed to render all assistance possible to those seeking employment and those seeking personnel.

In all three cities callers will find a welcome, a comfortable chair and time to chat. We promise no miracles but a sincere interest in you, whether you have jobs or your services to offer.—H. M.

LETTERS

(Continued from page 48)

occurred in the past, and will add up to nothing in the solution of providing several million homes in the next ten or fifteen years.

I contend that if the architect is to share in this program of home building, he must know first how his public lives, what they want, and then know how to give them these things at the least possible cost. If he will submerge his own individualism and create simply and logically, then he will have produced something that is lasting and enduring. . .

DONALD J. STEWART

Vancouver, Wash.

Forum:

You certainly have done a fine job on commercial remodeling in the October issue. It is good to know that the architects are finally becoming interested in planning retail stores.

We know that some store fixture manufacturers are fighting the architects. They fear they are losing their individuality and prestige and this situation may continue for many years. We, however, welcome the architect's service and definitely recommend to our prospects that they retain a competent architect or professional store designer.

All of our salesmen use The Forum pretty much as their bible.

Verne R. Lane, Vice Pres. & Gen. Mgr. Houston Show Case & Mfg. Co., Houston, Tex.





Utility Room Furnace Automatic—using oil or gas



Automatic Furnace Gas or Oil fired



Year round air conditioners Automatic, winter heating summer cooling

You'll sell more homes, and have 'em ready to move into, in less time, if you do business with the Viking contractor-dealer.

Now, and more and more in the postwar period, home seekers want automatic heating. Many of the better homes buyers demand year 'round air conditioning, too.

Viking Completely Fills Requirements

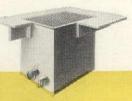
Whether you use oil, coal or gas, Viking can supply you with the most modern equipment to satisfy the demands of tomorrow's buyers. From water heaters, space heaters and floor furnaces, to Central heating boilers, furnaces and year 'round air conditioning plants Viking offers dependable and efficient units of the most advanced design.

No Installation Delays

Under the Viking distribution plan of

supplying contractor-dealers through strategically located Wholesale Distributors Viking heating, cooling and air conditioning equipment gets to the building site when you want it. The same trucks that carry the installation materials to the job get the major units there too. No divided responsibility, no misunderstandings—no costly delays.

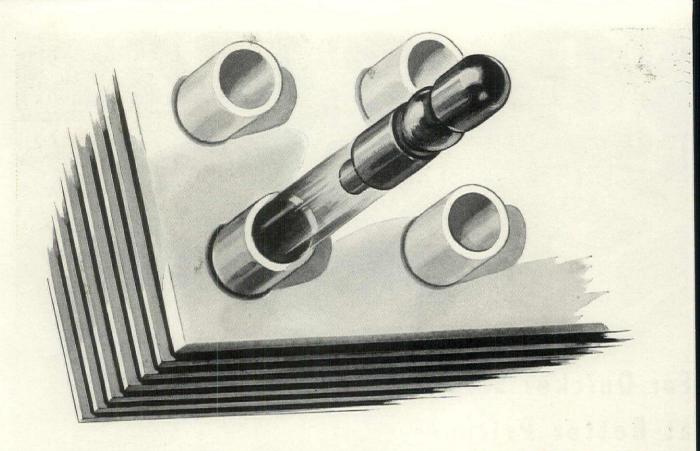
Viking Modern Equipment and Viking service both help you to quicker sales and better profits.



Automatic Floor Furnaces Oil or Gas fired VIKING



Viking Mfg. Corporation, 1603 U. B. Bldg., Dayton 2, Ohio



HOW A BULLET CREATES A BETTER HEATING UNIT

THE SECRET OF THE CONSTANT SERVICE AND LONG LIFE OF TRANE COILS

A bullet actually builds a road for better heating in the Trane Extended Surface Heating Coil. In a heating coil—whether used in a unit heater, convector, air conditioning unit, or in a central heating system—the bond that permits heat to escape from steam is important.

That bond not only serves a structural purpose but it also creates the pathway on which heat moves from the steam or hot water in the coil to the space you want to heat. If the path is partially or wholly blocked, the path of heat-flow is obstructed. As a result, the coil does not deliver its rated capacity. If any part of the path is weak and crumbles away, heat has difficulty in jumping the gap. And the coil breaks down before its time.

Because the bond is so important, Trane has spent long years in research to develop a perfect union. The marrying parson is a bullet. Seamless copper tubes are placed in the specially collared openings of flat metal plates called fins. A bullet is then actually shot through the tube.

The action of the bullet expands the copper tube into the collars of the fin to form a permanent mechanical bond. A strong man with a pair of pliers would have difficulty in pulling the fin away from the tube once the bullet has done its job. Yet, no paste, adhesive, brazing material or other foreign substance is used.

In the Trane Coil, the road for the heat to travel is wide open, and like the Appian Way, it's built to last. That's why you can get rated capacity from Trane Coils day in and day out for years.

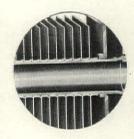
There are six Trane Coil types for steam at various pressures and for hot water. Hundreds of sizes are available to provide a coil for every use. Some Trane Heating Coils may even be used for cooling purposes when their heating tasks are completed. Write for Trane Catalog DS-385 now!

Also write for your copy of the new TRANE POST WAR PRODUCTS BULLETIN.

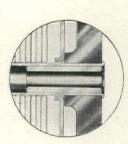
TRANE

THE TRANE COMPANY . LA CROSSE, WISCONSIN

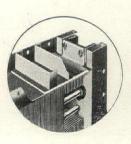
AIR CONDITIONING . HEAT TRANSFER . AIR HANDLING EQUIPMENT



A cross-section view of a Trane Coil showing tube and fin construction. Note that each fin or plate is formed not only to make contact with the other tube, but also with the adjacent fin. Heat from the tube can travel out over many interconnecting pathways. Another Trane Coil feature to give top heating performance.



The guardian against leaks is the husky brass bushing that reinforces the tube and header joint. Tube is rolled into an accurately reamed header opening. That makes a tight joint. But for double protection, the joint is permanently sealed by the brass bushing.



So that the coil can float in its casing, Trane uses its Guide Flange Assembly Feature. The coil can expand and contract without stress or strain on casting or any other part. This removes the possibility of tube strain.



A TYPICAL DEFENSE PLANT INSTALLATION



.. IN WAR OR PEACE

FEDERAL Precast Concrete Roof Slabs have met the exacting demands of architects and builders, in war as well as peace, for over thirty-eight years. They have withstood the ravages of time and the elements as proven by the record of thousands of industrial, institutional and railroad installations the country over.

Once laid, your Federal Roof requires no further attention. It is there to stay—permanent, fireproof and with never a dollar to be spent for painting, repairs or replacements.

Speed of installation may be vitally important. Modern Featherweight Precast Roof Slabs come to the job ready to lay directly on the steel purlins, regardless of the weather. The composition covering may be applied immediately thereafter.

No other roof construction offers equal adaptability, economy and lasting protection. Catalog, details and estimates on request.

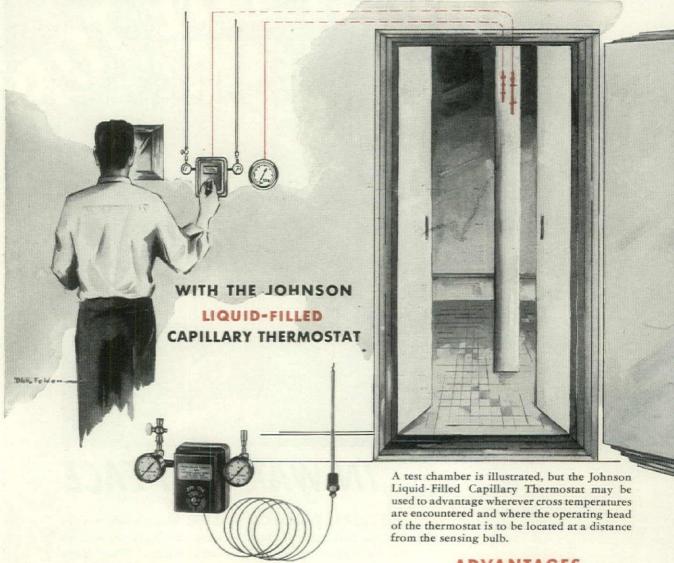
FEDERAL CEMENT TILE COMPANY

608 South Dearborn Street - - - Chicago 5, Illinois

For Over 38 Years Sales Offices in Principal Cities

THE ADVANTAGES ARE YOURS

WHEN YOU SOLVE CROSS TEMPERATURE PROBLEMS



WHERE regulated temperatures must cross above and below normal room temperatures, it is usually desirable to locate the operating head of a thermostatic control system at a distance from the sensing bulb. The ideal way to solve this troublesome problem is with the Johnson Liquid-Filled Capillary Thermostat which is only one instrument in a complete line of temperature control devices designed, manufactured and installed by Johnson. For full details of how this apparatus can help solve your cross temperature control problem, get in touch with the Johnson branch nearest you. There is no obligation, of course.

ADVANTAGES

- Wide range of temperatures,

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- Uniform dial graduations
- Not affected by ambient temperatures
- Extremely small thermometric lag
- Practically no mechanical lag
- Not affected by static head



JOHNSON



Automatic

TEMPERATURE AND AIR CONDITIONING Control

JOHNSON SERVICE COMPANY, MILWAUKEE 2, WISCONSIN . DIRECT BRANCHES IN ALL PRINCIPAL CITIES

PLAN FOR... more daylight with PC GLASS BLOCKS

THE light-transmitting ability of PC Glass Blocks is only one of the reasons why they are so generally used in dwellings, factories and office buildings, in schools and hospitals. Panels that harmonize with all designs add distinction, increase comfort.

For PC Glass Blocks also have a distinct insulating value. They exclude distracting sights and sounds, protect occupants from dust and draughts.

In addition, PC Glass Blocks effect worthwhile economies. Less artificial light, less repairs and replacements, less cleaning time—all add up to important savings.

In the many residential and industrial modernizing and building programs now in prospect, PC Glass Blocks will play an essential part in your plans. Now is the time to get full information on the wide range of sizes and patterns, the special functions, of PC Glass Blocks.

Also manufacturers of PC Foamglas.

In all sorts of processing plants, PC Glass Blocks provide floods of daylight. They protect precision machinery and goods in process from gritty dust, prevent client, help to maintain temperature and humidity levels. It ion, help to maintain temperature and humidity levels. PC Glass Blocks supply ample diffused daylight. Their insulating properties ease the load on heating and air-insulating properties ease the load on heating and circumstantial properties are easily cleaned. Conditioning systems. Flat surfaces are easily cleaned.

A unique combination of practical qualities and fine appearance ... that's what PC Glass Blocks have to affer the American Home. Exterior panels of PC Glass Blocks are attractive, they admit plenty of daylight, yet preserve privacy They make homes easier to heat. They are suitable for either modern or traditional architectural styles

PITTSBURGH

BLOCKS

Distributed by

PITTSBURGH PLATE GLASS COMPANY

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

PITTSBURGH CORNING CORPORATION 632 DUQUESNE WAY PITTSBURGH 22, PA. ILL IN AND MAIL THE CONVENIENT COUPON AND YOU WILL RECEIVE A FREE COPY OF OUR LATEST BOOKLET, WHICH TELLS ARCHITECTS HOW PC GLASS BLOCKS HELP TOWARD BRIGHTER, MORE LIVABLE QUARTERS—AND KEEP EXPENSES DOWN TO ROCK BOTTOM.

Pittsburgh Corning Corporation
Room 714, 632 Duquesne Way, Pittsburgh 22, Pa.
Please send me your latest booklet on the use of your PC Glass Blocks in many types of buildings. I incur no obligation.

Name

Address

City

State



your postwar specifications, you are actually providing future insurance of comfort and convenience for the building.

More speed plus uniform good fit because Wheeler-Osgood

PER TOURS MANUFACTURED READY TO INSTALL!

... ARE COMPLETELY

Tru-Sized Doors are designed to save valuable time and to help builders and carpenters do a better job than ever before. Because Tru-Sized Doors are precision machined to exact book opening, they fit perfectly any jamb that is plumb and square. Tru-Sized Doors, when ordered machined for locks and hinges, can save as much as 70 minutes on every door you install.

Tru-Sized Doors offer the best in modern designing, uniform quality, and master craftsmanship. Made of select Douglas Fir, they are super-strong, naturally rot-proof and highly mar-resistant.

TRU-SIZED

TO BOOK OPENING!

FOR HINGES!

BOHANNON & CHAMI SAN MATEO, CALIFORN

wheeler Osgood Company Tacoma 1, Washington

BORED IN

Your idea of writing to a few of the larger builders to get a general cross-section of postwar thinking is a good one. We, you get.

November 1,

Your records will show that on the San Pablo job, near Oakland, we used about 5,000 of your doors wiidh had been Fru-sized and for the most part the doors also bored for looks, dapped for linges and given one coat of resin sealer. Then again on the San Lorenzo job, your records will further show that you have just shipped the last car which makes a total of 25,000 doors on this 1,300 unit housing project. These doors also were sealer.

There can be no question that the better results and the saving of time and labor have stood out in a big way on every building in our estimation this Tru-sizing and machining of doors at the category will be more important in the postwar season than it is

Yours very truly,

BOHANNON AND CHAMBERLAIN

Haury L. Arnold Cen. Supt. of Construction HLAST

The Wheeler, Osgood Company, Dept. 11-25 Tacoma 1, Washington.

Please send me tree literature and detailed guide sheet for ordering Tru-Sized Doors.

City_



Your Waterproof Papers for Postwar Building

BROWNSKIN

For Sheathing

Its S-T-R-E-T-C-H sets it apart from ordinary sheathing papers, as does its special treatment against deterioration, passage of water or moisture. No sheathing paper like it. As long as a building lasts, so will BROWNSKIN.

BROWNSKIN VAPORSEAL

For Vaporsealing

Protects all kinds of insulation. Use on the warm side of insulation, leaving cold side free to breathe Thus, ideal dry conditions will be maintained

ECONOMY BROWNSKIN

Protects Flooring

One side is crinkled BROWNSKIN, the other flat kraft. Between flooring, the BROWNSKIN side goes down. Also unexcelled as a protector of finished floor surfaces in rooms where men are working. Here the BROWNSKIN side goes up.

ECONOMY BROWNSKIN REINFORCED Has Extra Strength

An all-purpose waterproof building paper, useful for temporary partitions, coverings, and the protection of all types of floors during construction.

COPPERSKIN

Protects Hidden Places

Electro sheet copper, bonded to BROWNSKIN by asphalt. Use in concealed places to protect insulation, for drip pans, and to flash windows, doors and all exterior openings.

In writing for Samples and Literature, please mention by name this Magazine.

1945 — Angier Golden Jubilee Year. A half Century of Protection to the Products of Our Nation and Its Industries — in Peace and War

ANGIER CORPORATION

CORROSION PREVENTIVE AND WATERPROOF PAPERS FRAMINGHAM, MASSACHUSETTS

IN THE FORUM

Postwar plans are already reality for the Al Parkers, who spat square in the eye of the Miami housing shortage and decided that there is no time like yesterday to begin living in a home of your own. With only their four bare hands and a working capital of 200 bucks, this Naval

lieutenant and his wife scavenged all the stuff their dream house (p. 106) is made of. They salvaged derelict hardware from old houses, wheedled window panes from a washed-up glass factory, floated logs off nearby keys. Of his helpmeet, Martha, Parker remarks: "She



is probably the only pregnant stone mason I shall ever employ."



T/Sgt. Georg N. Meyers, who dissected G.I. Joe's miracle house (p. 110) is a quietly frustrated fugitive from the newspaper business. In 1939 he fled the A.P. room in California, trekking to Alaska for a peaceful radio job. Before you could say Attu he was city editor of the Fairbanks Daily

News Miner, Alaska correspondent for A.P., the Christian Science Monitor and Time. His latest escape route, the army, looked good until the long arm of Yank deposited him firmly before a typewriter. Meyer's luck: he was picked for the postwar house assignment because he knew less about housing than anyone else in the office.

The inevitability of Nathaniel Owings' success in architecture is demonstrated by that day in Ithaca when the class of '27 had their 10th reunion. Prankster Owings and several other mischievous old boys took precautions against a dull ceremony by stuffing live geese into the



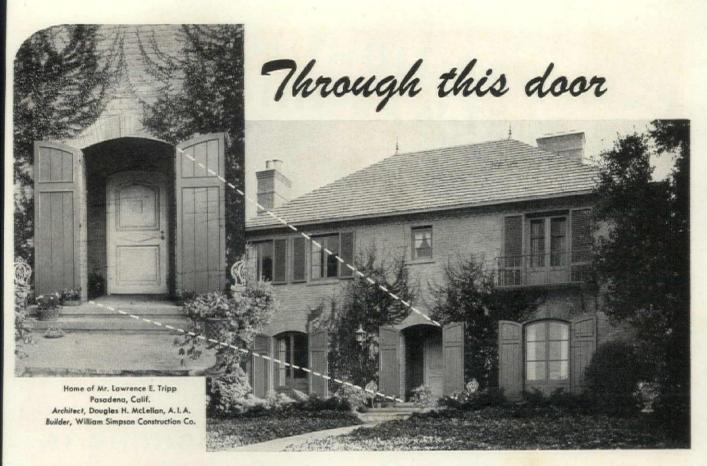
pipe organ. When the organist played, wind forced the desperate creatures out of the pipes, turning the staid auditorium into a . . . yes, a honkey-tonk. This incident reveals the imagination of a true creative artist, also displayed in the Little Traverse Hospital (p. 91).

Mindful of the needs of a growing family, Lt. Commander Seth Talcott abandoned a bungalow plan, built a house



(p. 108) large enough for scores of potential grandchildren. His theory: expand the family to fit the house. This reversal of the approach ordinary is also evident in the first party given at his new homestead—no housewarming, but a soirée for workmen to "alle-

viate construction pains." A Christmas tree tied to the gable and quantities of beer served as inspiration for all hands. We would like to think that after the 15th round a hilarious Talcott walked the ridgepole giving out "Silent Night" in a melodious tenor.



...to comforting, dependable warmth

Members of the Lawrence E. Tripp family and guests enjoy a home, the first glimpse of which promises warm hospitality. Perhaps it's the wide-open shutters, the vine-clad brick walls or a combination of architectural details. Whatever it is that creates this pleasing first impression, the interior fulfills its promise. The rooms are suffused with clean, fresh, uniform warmth . . . dependably provided, year after year, by a PAY NE Furnace installation.

You will
ZONE-CONDITION
your home of tomorrow
Write for new booklet on

Write for new booking.

PAYNE ZONE-CONDITIONING, successor to old-fashioned central heating. Circulated winter warmth, cooling summer ventilation...controlled by zones or individual rooms.



PAYNEHEAT

30 YEARS OF LEADERSHIP



Payne FURNACE & SUPPLY CO., INC., BEVERLY HILLS, CALIFORNIA

1944 PAYNE FURNACE & SUPPLY CO , INC

POST-WAR LIGHTING FOR POST-WAR THINKERS!

JOLEGO SPECIFIC LIGHTING IS FLUORESCENT EQUIPMENT AT ITS BEST

HE DESIGNE AND CONSTRUCTION SUGGESTIONS SHOWN INTERPRETATION AND ARE NOT FOR THE CONSTRUCTOR AS INFRINGEMENTS ON EXCEPTING PARENTS.

In tune with the future that will demand smart, modern appearance as well as maximum utility and minimum maintenance, Joleco Fluorescents are now providing steady, trouble-free, soft, non-glare light specifically engineered for greater productive efficiency in offices, factories and stores from coast to coast.

Incorporating, among many exclusive features, these advancements—one-piece top and bottom plate construction for installation speed—easily removable reflector plates for simplicity of maintenance—scientific ventilation principle for maximum heat dissipation—Joleco offers the best in good lighting and improved design at the lowest total cost.

Devoted only to war production for the past three years, Joleco engineers have contributed to and learned much about the science of light. Again Joleco is ready to offer architects, contractors, engineers and other interested executives its counsel and aid in solving their problems of low-cost,

Write freely and without obligation.

JØLEC@

low-maintenance, "production-plus" illumination.

PLUORESCHAT LICHTING FIXTURES

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ST.LOUIS E,MO.

The ultra-modern Shell

Building in St. Louis, only one of many in

which Joleco Fluorescents are standard equipment
throughout.

DON'T LET YOUR NEW HOME BECOME A" DRUG ON THE MARKET"



... here's one way to prevent it!



DINING ROOM SETTING FROM THE JOHN SHILLITO COMPANY, CINCINNATI



AN ADEQUATE CHIMNEY gives you freedom to heat with any fuel-including the least expensive and most plentiful of them all, Bituminous Coal. And remember, today's expensive fuels may be even more so in the years ahead!

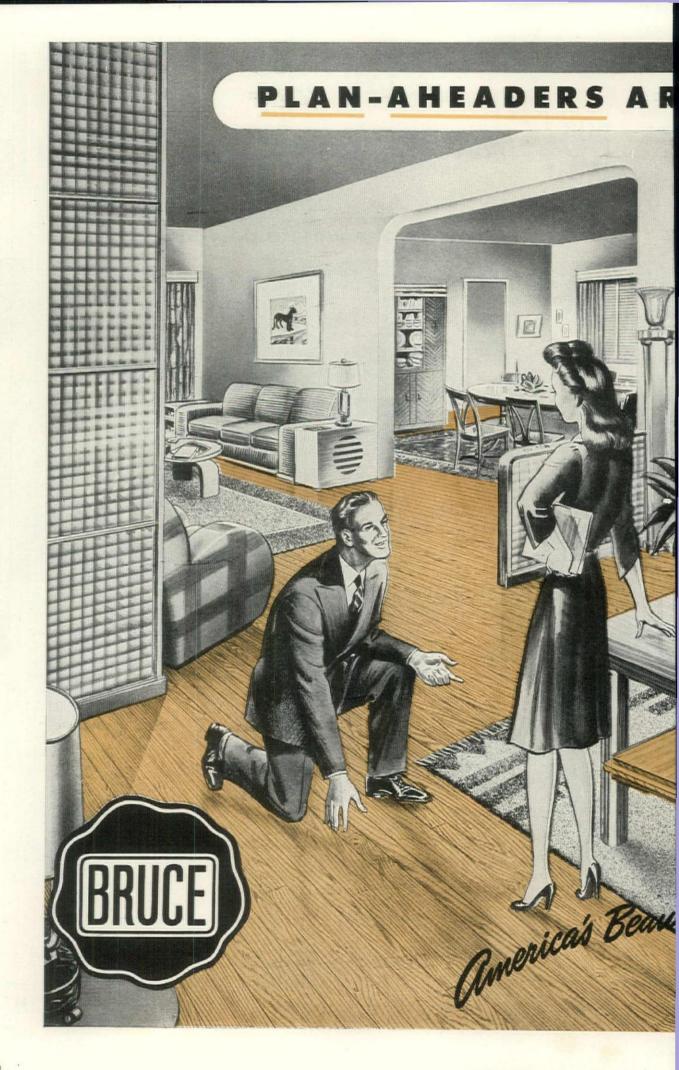
One way to make sure your home won't cost too much to heat is to make sure it has an adequate chimney—one big enough to handle all heating fuels equally well. Big enough, for instance, to provide the natural draft needed to burn Bituminous Coal-the fuel that gives the most uniform heat-the least expensive of all fuels-and the one fuel that will always be low in cost because America has a 3,000year supply!

The extra cost of building such a chimney is small -only about \$16 for the average 7-room house! 4 out of every 7 homes in this country depend on Bituminous Coal for steady, even heat. And any home owner who has one of the modern coal-stokers knows how "automatic," how clean and odorless Bituminous Coal is, when properly burned.

Your architect or builder will tell you that a chimney adequate for burning Bituminous Coal is also efficient for any other fuel you ever might choose. Talk it over with him-it will pay you to do so!

BITUMINOUS COAL INSTITUTE, 60 EAST 42ND STREET, NEW YORK 17, N. Y.

(This is one of a series of advertisements now appearing in home-makers' magazines)



LANNING NOW for

BRUCE STREAMLINE FLOORS!

EXPECT a big demand for Bruce Streamline Flooring, just as soon as building begins again. You won't be disappointed!

For Mr. Homeowner of Tomorrow has heard bout this modern flooring sensation from his riends. He's seen its rich, distinctive beauty in heir homes... and he's going to be demanding for his own home soon. He's really sold!

His wife has heard plenty, too. News gets around ast on anything that helps make housework easier . . and Bruce Streamline Flooring certainly does! Iousewives everywhere praise the ease with which hese floors can be kept spic-n-span and the way hey retain their good looks through the years.

Sound scientific reasons!

ruce Streamline Floors are carefully and precisely nished in modern plants by skilled craftsmen. his beautiful and wear-resistant finish actually enetrates into the wood, sealing pores against irt and wear... assuring ease of cleaning.

Ready to walk on

Bruce Streamline Floors cost no more than ordinary floors—sometimes less. Yet they come expertly finished...ready for home use the minute they're laid. No costly building delays! No uncertain on-the-job sanding and finishing! Practical and proven! Investigate the many important advantages of Bruce Streamline Floors now. We'll be glad to hear from you.

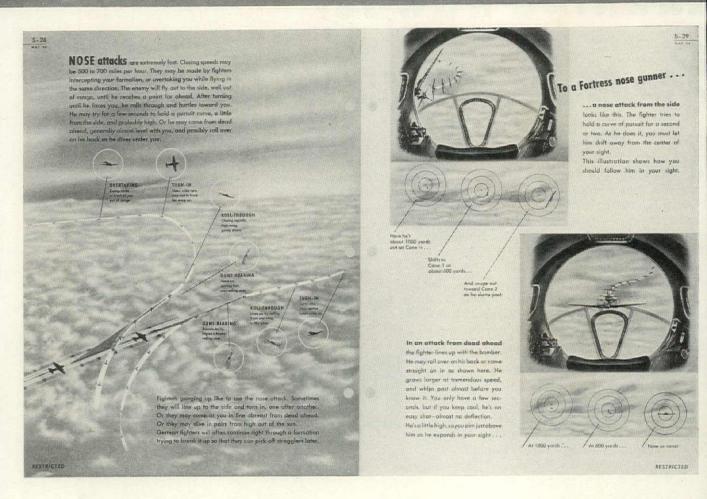
E. L. BRUCE CO., MEMPHIS 1, TENN.

THE FLOOR WITH THE BEAUTIFUL ENDURING FINISH

Rester Pest Proves Indeed In the Proves In the State of this part of the Proves In the State of the Proves In the State of the Proves In the State of the Proves In the Ordinary of the Proves In the Proves I

E. L. BRUCE CO. . WORLD'S LARGEST MAKER OF HARDWOOD FLOORS

FORUM OF EVENTS



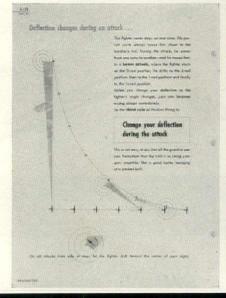
AAF's new manual utilizes advanced graphic techniques to show gunners the many hazards of the air.

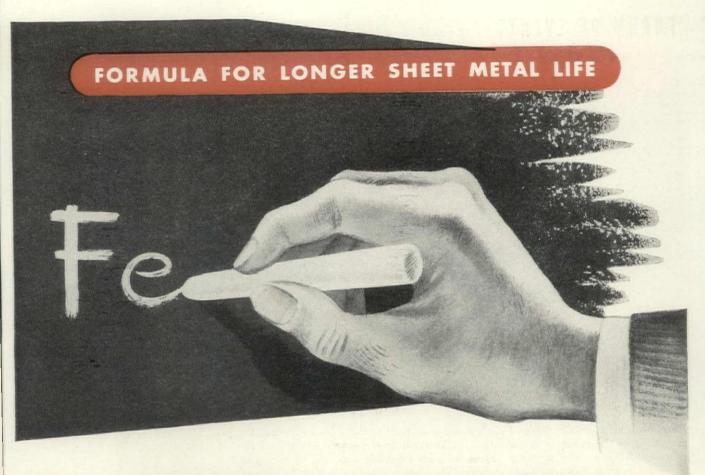
Like the Army mule, the old dog-eared gunnery manual had about it an air of unadorned drudgery. It boasted an unlimited supply of information, but its leaden character often failed to put across the fact there is a lot more to shooting than releasing the trigger. Typical students suffered from a sort of cabalistic detachment that only actionfirst hand - could dispel. Recognizing the limitations of academic presentation in this field, the Army Air Force Instructors' School for Flexible Gunnery set out to develop a graphic technique that would lend some realism to the preparatory instruction. Their new manual, a few pages of which are reproduced here, testifies to their success. Air brush rendering, used to achieve the three dimensional quality of the illustration, is a medium which explains with clarity beyond that of the written word, the principles of deflection, compensation, offensive and defensive action. Short of motion pictures, no technique more successfully conveys at a glance the decisive conditions of aerial combat.



(Continued on page 68)

FORMAT AND GRAPHIC INTERPRETATION BY SGT. WILL BURTIN, AUS





It Begins with the Iron in Toncan Iron

... and produces the Highest Rust-Resistance of any Ferrous Material in its Price Class

Fe, the symbol for Iron, is the beginning of a proved formula for longer sheet metal life. And it is the first of many reasons why Toncan Iron has the highest rust-resistance of all ferrous materials in its price class.

Toncan Iron is made from an openhearth iron that is refined to an exceptionally high degree of purity. Thus, chemical impurities and nonuniform grain structure, which invite corrosion, have been reduced to a minimum.

Besides that, Toncan Iron is an alloy. To the refined open-hearth iron is added twice as much copper as found in copper-bearing steel. It also contains molybdenum—added to make the copper more effective.

You'll like Toncan Iron, too, because its rust-resistance is uniform —all through the metal. And because Toncan Iron is a refined iron and carefully processed for ductility, it is one of the easiest materials to fabricate by all methods.

Get the full story about Toncan Iron's longer service and lower fabricating costs in Booklet No. 406, "A Few Facts about Toncan Iron for Architects and Engineers."

REPUBLIC STEEL CORPORATION GENERAL OFFICES • CLEVELAND 1, OHIO Export Department: Chrysler Building, New York 17, N.Y.

SEE SWEET'S FILE

or write us for detailed information on these Republic Steel Building Products Pipe—Sheets—Roofing

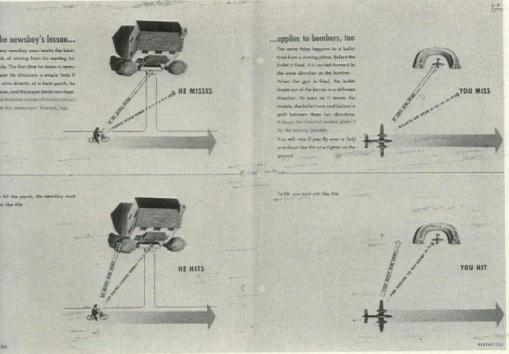
Enduro Stainless Steel
Toncan Enameling Iron
Electrunite E.M.T.
Fretz-Moon Rigid Steel Conduit
Taylor Roofing Ternes
Berger Lockers, Bins, Shelving, Kitchen Cabinets
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and other building products

Republic COPPER MOLYBDENUM RON

—for ducts, gutters, conductor pipes, roofing, siding, tanks, ventilators, skylights, hoods, and other rust-resisting sheet metal applications.

FORUM OF EVENTS

(Continued from page 66)



The number of Rods...

Integration of the Paylor of Rods...

Assert of search on the Paylor of Rods...

Assert of search on the Paylor of the 120° register of the 120° register

One of the most difficult things for a gunner to acquire is the habit of leading the target. Here the principle of deflection is illustrated by the simple example of the newsboy delivering the morning papers with an infallible aim. At right, attack angles of approaching planes are visualized as a series of nested cones.

(Continued on page 72)



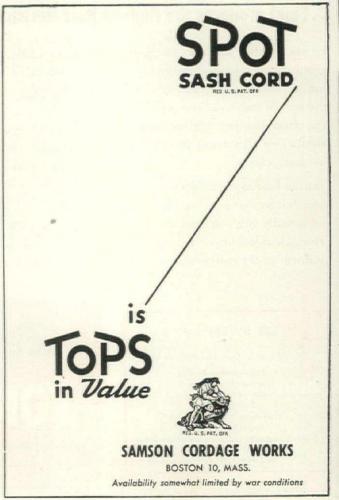
1. Cabot's Collopakes are colloidally compounded. Oil and pigments are inseparably united to form a durable, even paint film that stands up for years.

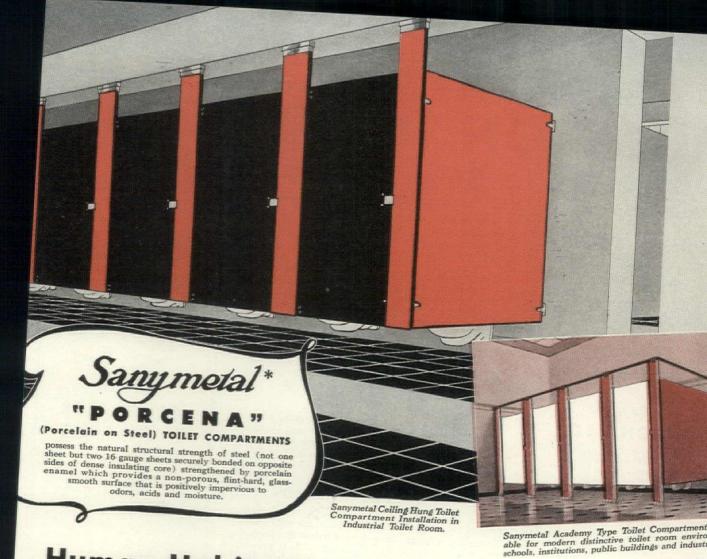
stands up for years.

2. Cabot's Collopakes are made only from the purest pigments—and therefore hold their rich, lively colors longer.

Write today for color cards and "The Little White Book" containing full information. Samuel Cabot, Inc., 1266 Oliver Bldg., Boston 9, Mass.

*Cabot's Collopakes and DOUBLE WHITE





Human Habits Don't Change But There is a Way to Give LONGER SERVICE LIFE to Industrial TOILET ROOMS

RAPID DEPRECIATION of industrial toilet rooms is unnecessary. Toilet compartments usually influence a toilet room environment. Toilet compartments made of materials that resist depreciation over a long period of service give longer service life to industrial toilet rooms.

Sanymetal "Porcena" Toilet Compartments are fabricated of the ageless and fadeless material, - porcelain on steel; a material that has demonstrated in numerous industrial plant toilet rooms its ability to withstand the excessive abuse and usage that occurs in such installations. Porcelain on steel makes a non-porous, flint-hard, glass-smooth surface that always looks new, is moisture and rust proof, and that is positively impervious to odors or ordinary acids. The glistening porcelain finish can be wiped clean as easily as any glass-smooth surface.

Sanymetal "Porcena" Toilet Compartments will be furnished whenever materials are available in several strikingly new designs and colors and in two different types of construction

-standing and ceiling hung. A strictly modern development, Sanymetal Ceiling Hung Toilet Compartments promote a higher standard of order and cleanliness in industrial toilet rooms. Sanymetal "Porcena" Toilet Compartments embody the results of over 30 years of specialized skill and experience in making over 60,000 toilet compartment installations. Ask the Sanymetal Representative in your vicinity (see "Partitions" in your phone book for local representative) for further information about giving a longer service life to

Sanymetal Asbestos Board Toilet Compartments complete with door hardware and partition fittings are available for wartime installations. These toilet compartments provide a durable and rigid installation, free from dirt-collecting pockets and ridges, easy to keep clean. Write for bulletin No. 940.

THE SANYMETAL PRODUCTS CO., INC., 1687 Urbana Rd., Cleveland 12, Ohio

anume TOILET COMPARTMENTS and Office

anymetal Catalogue No. 82 contains illustrations in color of several types of "Porcena" (porcelain on steel) Tailet Com-

COTTON INSULATION

is 4% to 36% more EFFICIENT!



Says the ARCHITECT

"The superiority of cotton as an insulator is obvious. It is more efficient in every way, with lifetime durability. I specify Cotton Insulation because I know that it backs up every inch of my best judgment."



Says the BUILDER

"The homes I build are modern, which means that they're insulated with the best material on the market-Cotton Insulation. The building dollars I invest in it are quickly returnable, for Cotton Insu-lation helps sell houses." Tests of every kind-laboratory and in useestablish Cotton Insulation as definitely superior in every phase of efficiency.

IT HANDLES BETTER

Compressed in its container—no waste in transportation or storage. Uniform in density—no doubt about value received. Cotton Insulation is free from abrasive particles — cannot harm skin or clothing.

INSTALLATION EASIER AND QUICKER

Although available through competent applicators, Cotton Insulation is so simple to install that anyone can do it with ease. It unrolls like a rug. No special equipment is needed.

REDUCES WEIGHT

Cotton Insulation is snowy-light—weighs about 220 pounds per thousand square feet — three inches thick. It decreases thickness too — provides equal insulation value with 20% to 25% less bulk than some comparable insulating materials.

NEVER SETTLES-NEVER PACKS

The efficiency of Cotton Insulation increases with age. Heat and vibration, which may cause some insulations to settle and lose effectiveness, tends to fluff Cotton Insulation to a greater thickness and it becomes more efficient than before. The durability of Cotton Insulation is lifetime.

EXCEEDS ALL TECHNICAL REQUIREMENTS

Cotton Insulation refuses to burn—only chars—when a 1600° F. flame from a blowtorch is applied to it for a period of 20 minutes. It repels insects and vermin and sheds destructive moisture. No priorities are required. Included in standard specifications of FHA and FPHA, Cotton Insulation transmits less heat per inch of thickness than any other insulation material commercially available today.

MADE TO U. S. GOVERNMENT STANDARDS

Cotton Insulation is fabricated to conform to the specifications of the United States Department of Agriculture. All production, including the vapor barriers, is inspected, approved and certified by trained government inspectors.

For more detailed information and a full account of government tests of amazing product, write to -NATIONAL COTTON COUNCIL, Box 18, Memphis 1, Tenn., for the booklet "Cotton Insulation."



Says the CONTRACTOR

"My installation problems are over! Cotton Insulation is so easily and quickly installed. In these days of labor shortages, this really means something to melower labor costs and fewer man hours -- and it surely does the work."

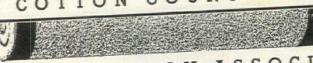


Says the

DEALER

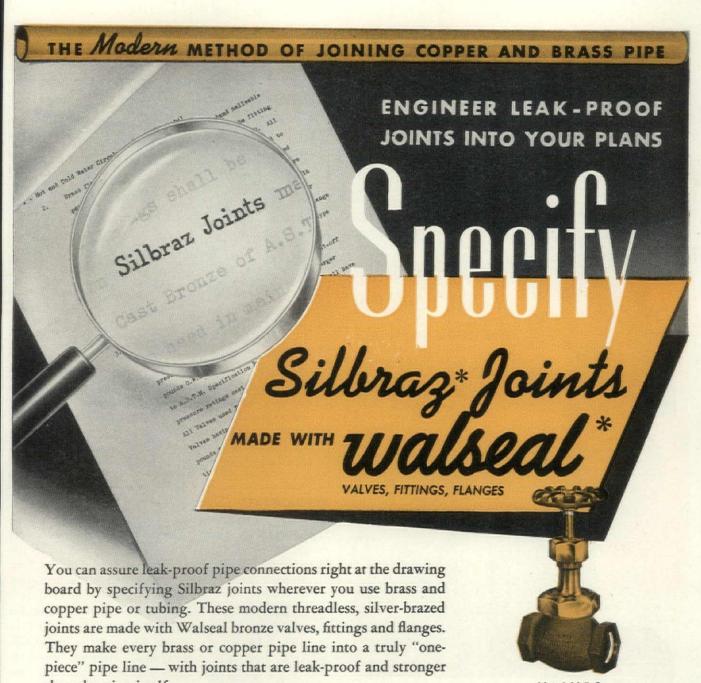
"The many advantages offered by Cotton Insulation make it easy to sell. Its blankets are packaged rolled in clean sections no waste, handled with ease, and profitable! It brings lasting comfort and its price fits into any fam-ily budget."

OF AMERICA NATIONAL COTTON COUNCIL



COTTON INSULATION ASSOCIATION

FOR OFFICIAL GOVERNMENT TESTS WRITE NATIONAL COTTON COUNCIL, BOX 18, MEMPHIS, TENNESSEE



than the pipe itself.

Easily installed by oxyacetylene flame brazing, Silbraz joints cannot creep or pull apart under any shock or pressure to which the pipe itself can be safely subjected. They require neither maintenance nor repairs, and are good for a service span equal to or greater than the life of the pipe.

Walworth Catalog 42 gives a detailed description of the complete line of Walworth valves and fittings including Walseal valves, fittings and flanges for making Silbraz joints. Be sure to write for a free copy, on your letterhead please.

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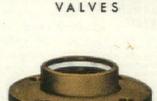
MAKE IT A "ONE-PIECE PIPE LINE" WITH WALSEAL



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valves AND fittings 60 EAST 42nd ST., NEW YORK 17, N.Y.



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U. S. Pat. 1.887.814
The exclusive interlocking grid core within the Rezo door allows constant air circulation, adds extra strength and provides greater rigidity.

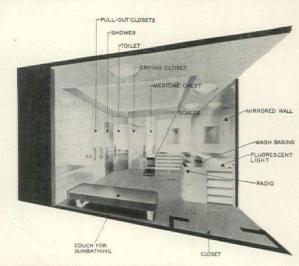
Doors are a dominant feature of every room. How important, then, that you specify a door that will work with your plans, like the Paine Rezo . . . a door that widens your opportunity to design refreshing effects with attractive, flush interior surfaces. But Paine Rezo doors do

not alone serve as a tool for better architectural design; they fulfill your client's interest, and yours, too, in long, trouble-free service. The patented air cell construction that only Paine Rezo offers, prevents warping, provides greater strength, extra rigidity and lightness in weight, at an installed cost no greater than that of common panel doors. No wonder, then, that the Paine Rezo is the flush door most frequently specified by architects . . . for more than one million have already been installed from coast to coast. Write now for detailed bulletin.

Manufactured by the PAINE LUMBER CO.,Ltd. Oshkosh
ESTABLISHED 1853

FORUM OF EVENTS

(Continued from page 68)



POSTWAR DESIGN OF THE MONTH

Like a good many others, Egmont Ahren's dream bath for the victory Mardi Gras sets an elaborate stage for the execution of one of life's simplest routines. The fact that the design is presented as a complete innovation is entirely eclipsed by its precocious title, Design for Laving. Architects, please note that the symbolic triangle (à la Coward) has been subtly omitted from the scheme.

APPOINTMENTS

President Charles Seymour of Yale University announces the appointments of Richard Marsh Bennett as professor of design and Christopher Tunnard as visiting lecturer in the Department of Architecture of the Yale School of Fine Arts. Mr. Bennett, an associate of Edward D. Stone on the design



Richard Bennett

of New York's Museum of Modern Art, was winner of the competition for the Wheaton College Art Center and, in association with Caleb Hornbostel, received honorable mention in the competition for the Smithsonian Institute in Washington, D. C. An alumnus of the Harvard School of Graduate Design, Mr. Bennett is best known for his residential work, the student alumni building at Wheaton Col-

lege and several World's Fair exhibits.

Mr. Tunnard, author of Gardens in the Modern Landscape, is an associate editor of the Forum. He attended Victoria

Christopher Tunnard

College of the University of British Columbia and had professional offices in London from 1934-39. Mr. Tunnard, who is to give courses on community, city and regional planning at Yale, is well known throughout the U. S. and Great Britain as a landscape architect and lecturer. Before his honorable discharge, he served with the Royal Canadian Engineers and has been a lecturer on

regional planning at the Harvard Graduate of School Design.

(Continued on page 76)



WHEN IT CAME TO "EATIN' EQUIPMENT" they turned to Stainless Steel

MERITS OF ALLEGHENY METAL

- food or fruit acids.
- nishing, no off-testes.
- * Lustrous, handsome,
- * Easy to form, weld,
- * Lowest maintenance and depreciation

FOOD and stainless steel are two substances which get along well together. You can find ample evidence of that fact in the preparation and serving equipment of almost any hotel, hospital, restaurant, bar or soda fountain—and more recent evidence in the mess trays, flatware, stock pots, canteens, meat pans, field kitchens, portable refrigerators, etc., of the Armed Forces.

Food and beverages, after all, are chemicals—and Allegheny Metal, the pioneer stainless in this country, is a highly chemically-resistant material. It's bright, tough, close-textured and exceptionally strong. The sanitary factor is high, cleaning is easy, and life in service is exceptionally long. Those are properties, when you're thinking in terms of food, that look good from any angle.

If you have ideas and questions on food equipment—anywhere along the line, from processing to serving—we can fill in many of the answers. Allegheny Ludlum Steel Corporation, Pittsburgh, Pa., and other Principal Cities.

Allegheny Metal is also handled and stocked by all Joseph T. Ryerson & Son, Inc. warehouses.



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The Time-Tested Stainless Steel

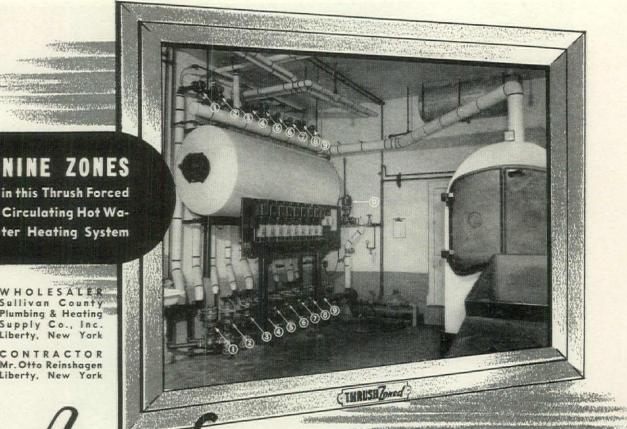


REMEMBER THE NAME TODAY FOR THE NEEDS OF TOMORROW



WHOLESALER Sullivan County Plumbing & Heating Supply Co., Inc. Liberty, New York

CONTRACTOR Mr. Otto Reinshagen Liberty, New York



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PROVIDE REAL HEATING COMFORT AND ECONOMY



THIS installation of Thrush zoning in the Margaretville Hospital, Margaretville, New York, is an outstanding example of efficient layout and economical heating. Nine heating zones incorporating nine Thrush Water Circulators and Nine Thrush Flow Control Valves give perfect control of temperatures in various parts of the hospital, reducing fuel consumption and increasing comfort because each zone carries the exact temperature needed all of the time. There is no overheating. An additional Thrush Circulator circulates boiler water through a submerged heater in the storage tank, providing the plentiful supply of hot water so constantly needed in hospital service. Have you canvassed your community for opportunities like this to modernize heating equipment and reduce fuel consumption to help the war effort? Get all the facts now from your wholesaler or write Department H-2.

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forget miracle houses

what people really want is full convenience

Clectrical iving

For years the use of electricity in the home has been increasing steadily. Today, there are over 40 servants in common use. Tomorrow, there will be more.

America wants the full convenience of modern Electrical Living, which requires adequate wiring. This means enough electrical circuits to deliver power where it's needed, and outlets at arm's length wherever they're required... served with plenty of power. Electrical Living also means better use of lighting, for decoration as well as illumination.

The cost of adequate wiring is a very small part of the cost of a home. Yet it has an outstanding influence on the value of homes—on appeal to the owner, or to buyers.

A careful study of your wiring plans will pay big dividends. And use of Westinghouse equipment will be your assurance of complete client satisfaction. A consulting service on home wiring and lighting is available to the profession. Contact your nearest Westinghouse distributor or district office.

Tune in: John Charles Thomas, Sunday 2:30 E.W.T. N.B.C.—Hear Ted Malone, Mon. Tues. Wed. Evenings, Blue Network.



BETTER HOMES DEPARTMENT

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VACUUM BREAKERS

Scientifically designed to prevent contamination by siphonage and eliminate interconnections between water supply lines and fixtures. Also recommended is the Fixed Air Gap designed to eliminate interconnections between water lines and sewers. The positive way to keep drinking water safe from pollution. Send for information on both of these items.



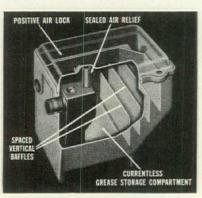
DRAINAGE CONTROL VALVE

With both automatic and manual operation in the same unit, it is the one proven method of protecting basements from back flooding by street sewers. Installs flush to the floor. Prevents damage to basement contents, building foundations and keeps air from becoming foul from sewer water. Complete installation information on request.



KITCHEN FLOOR DRAIN

Permanently secured in cement it provides water-tight floor installation. Has removable basket with seepage pan cast to body of drain. No hidden corners—all parts accessible for cleaning. Built for rugged restaurant use.



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Boosey Air-Away Grease Interceptors are built in various sizes to fit any installation requirement. High operating efficiency and maximum grease holding capacity. Internal air relief prevents siphonage of the interceptors' contents and is sealed to prevent escape of sewer gas when cover is removed. Sanitary—economical—built for years of hard use.

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During the past forty years Boosey has compiled a valuable file of tried and proven drainage layout plans which have satisfactorily met the requirements for all types of buildings. A copy of a plan suited to your particular building requirements is available at no cost. Please give as much detailed information as possible when requesting this service.



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AMERICAN SKEIN and FOUNDRY COMPANY

FORUM OF EVENTS

(Continued from page 72)

DIED

ISAAC NEWTON PHELPS STOKES, New York architect, historian and housing expert, in Charleston, S. C. A graduate of the Columbia School of Architecture, Mr. Stokes also attended the Ecole des Beaux Arts in Paris and upon his return to this country, became a partner in the firm of Howells & Stokes which designed many well known buildings on the East Coast. Long a prominent leader in the housing movement, he served as manager of the preliminary investigations division of the Bureau of Industrial Housing and Transportation of the Federal Department of Labor and assisted in forming the US Housing Corp. In 1935 he was chosen by the architectural societies of New York to preside over the jury that selected the first Mayor's Panel of architects for the design of public buildings. He was president of the New York City Art Commission from 1921 to 1938. Mr. Stokes, who was 77 years old at the time of his death, held honorary degrees from New York and Columbia Universities.

CHARLES W. STOUGHTON, a member of the architectural firm of Stoughton & Stoughton of New York City. Designer of the Canton Christian College in China, the Polytechnic Institute of Puerto Rico and other religious and commercial buildings. Mr. Stoughton also worked on the design of the Bronx River Parkway.

CORYDON PURDY, New York engineer and pioneer in the development of the skyscraper, in Melbourne, Fla. He was 85 years old. A partner in the firm of Purdy & Henderson, he supervised the design of many of the country's most famous buildings including the Flatiron Building, the Metropolitan Life Tower, the Whitehall Building and the old Hippodrome in New York, the Bellevue-Stratford Hotel in Philadelphia and the New Willard Hotel in Washington, D. C. His design of the Times Building in New York was of particular consequence since it involved for the first time the problem of overcoming the vibration of the subway, then under construction.

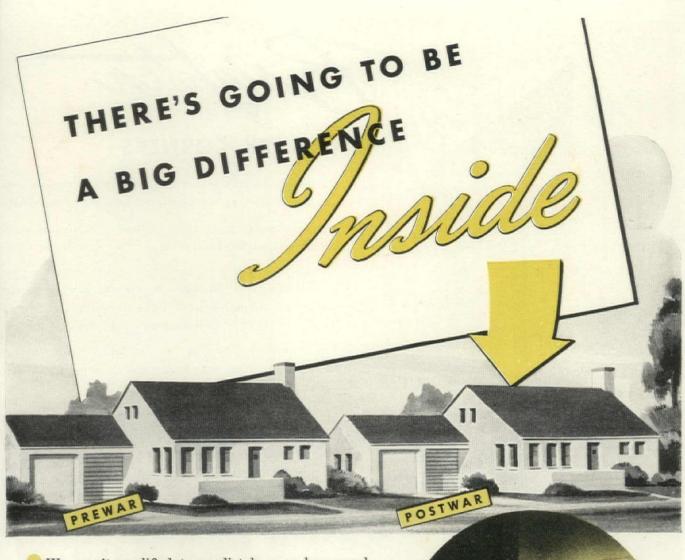
Bohdan Pniewski, well known Polish architect, killed during an uprising in Warsaw. Professor of architecture at the Warsaw Polytechnic Institute, Mr. Pniewski was best known for his design of the projected Temple of Divine Providence, a religious edifice provided for by the Polish constitution in 1791 but abandoned until 1919 due to the partition of the country. He also designed the Hotel Patria in Krynica and the reconstruction plans for the Bruhl Palace in Warsaw.

Wassily Kandinsky, dean of non-objective painters, in Paris at the age of 78. Born in Moscow, he spent his childhood in Italy, attended the University of Odessa and worked as an artist in Munich, Paris and Berlin. He was art professor at the Bauhaus from 1922 to 1932 and had been since 1934, working in Paris. His works are represented in this country at the Museum of Non-Objective Painting, the Museum of Modern Art and the Chicago Art Institute.

CORRECTION

Credit to the Ballinger Co., was inadvertently omitted from the article in the December issue on the unique lighting system installed in the Edward G. Budd Mfg. Co., assembly plant. The Ballinger Co., acted as architects and consulting engineers for the design of the building and its service equipment including the lighting system described in the article.

(Continued on page 80)



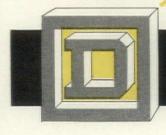
We aren't qualified to predict how or how much different postwar homes will look from prewar homes—on the outside. But judging from every current indication, there's going to be a big difference—on the inside. Something new is going to be added.

According to the trend, a great many postwar homes are going to be built and sold with a lot of "built-in" features. Equipment and appliances, heretofore installed after the home was completed, are going to be provided as an integral part of the postwar home. Most of these will be electrical. Adequate wiring is the first important step in providing for these "built-in" electrical features. It is a factor that simply can't be overlooked.

The Square D Multi-breaker is a basic ingredient of adequate wiring. It eliminates fuses completely—affords modern convenience and protection—makes it easy to add circuits as they are needed.

Discuss the Multi-breaker story with your electrical contractor. If you'd like to have your nearest Square D Field Engineer sit in with you, he's at your service.





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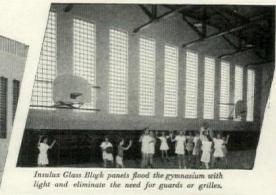
THE DARK CORNERS

Let the blessed sunshine in. Flood classrooms, corridors, gymnasiums, libraries and laboratories with natural daylight.

You can-easily-by installing lustrous light-flooded panels of Insulux Glass Block.

Insulux is a beautiful building material. Practical, too! It transmits natural daylight. It provides privacy. It cuts down sound transmission. It locks out dust and dirt. It reduces the cost of heating and air conditioning.

Furthermore-a panel of Insulux Glass Block requires little attention other than occasional cleaning. Painting is never required.



Illustrations show the new Beall Junior and Senio High School, Frostburg, Maryland. Architect-Robert Holt Hitchins, Cumberland, Maryland.

Insulux Glass Block is a functional building materialnot merely a decoration. It is designed to do certain things that other building materials cannot do. Investigate!

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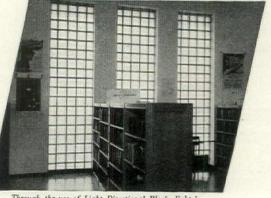
INSULUX

GLASS BLOCK

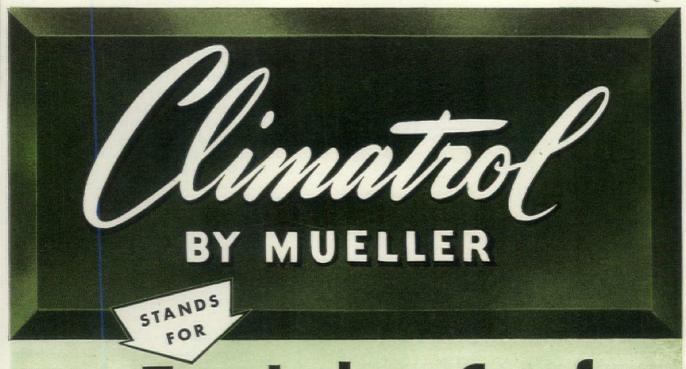
For technical data, specifications, and installation details, see our section in Sweet's Architectural Catalog, or write: Insulux Products Division, Dept. B-9, Owens-Illinois Glass Company, Toledo, Ohio.



Panels of Insulux have been used to brighten the dark in corridors, stairwells and entry ways.



Through the use of Light Directional Block, light is projected deep into the interior of the library. No glare!





True Indoor Comfort

.. a key factor in the success of your post-war homes

Comfort depends primarily on conditioning of air — in these 6 ways:

- 1. Temperature control.
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- Removal of dust, pollen, and other foreign matter.

Securing these benefits depends on installing a system that is basically designed to handle and condition air.

Above all, it is important to start right — with a system that takes your client as far as possible along the road to true indoor comfort. That means a Mueller Climatrol system. Then he may later add more of these improvements as they become available or as they fit into his budget.

Today, standards of indoor comfort are higher. To keep up to date and protect your reputation for progressive design and satis-

- 2. Humidity control.
- 4. Introduction of fresh air.
- Removal of bacteria conveyed on dust.

factory performance, you need to give this matter No. 1 priority in your post-war building budget and allocate a sufficient part to achieve this result.

Start planning now. Get complete facts on the 88-year performance record behind Climatrol equipment—your assurance of efficiency, economy, and the utmost in indoor comfort. Then make your selection from the most complete line on the market . . . including exactly the right equipment for your needs.

Write for free book.

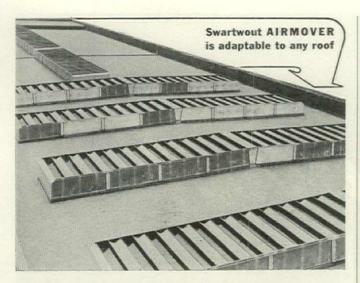
Mueller magazine advertising is telling this story to millions of present and prospective home owners.



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Units specially designed for the fuel of your choice . . . gas, oil, or coal.

Equipment for homes of every size, type, and price range — old or new.



Modern "Open Roof" Ventilation with Swartwout AIRMOVER

Solves toughest large scale ventilation problems

● Nowadays no successful employer denies the extreme importance of ventilation in efficient industrial operations. More and better production is the profitable result when working areas are cleared of excessive heat, smoke and fumes — a result easy to get, and economically, with Swartwout AIRMOVER "open roof" method of natural ventilation. It is in everyday use on many mill and factory buildings, giving unusually successful results.

Built in quickly erected units only 32 inches high, AIRMOVER is installed in any quantity, up to practically complete roof coverage. Any roof, even on old buildings, can carry an AIRMOVER installation, without expensive alterations. Custom-built equipment is supplied where necessary. Send sketches of your buildings for suggestions of improving your factory ventilation.

The Swartwout Company 18511 Euclid Ave., Cleveland 12, Ohio



FORUM OF EVENTS

(Continued from page 76)

MORE MONUMENTALITY

Not to be ignored in current esthetic trends, the Gaines Dog Research Center of New York has announced a \$500 prize for the design of a memorial in honor of the dogs who will have fought and died in World War II. Complying with American Kennel Club standards of pedigree it is stated that, "a committee of prominent dog people" are now being selected as the jury. Delineation, it appears, will not count as a decisive factor in the judging. Anyone with a warm heart is eligible, provided they can think up a monument suitable for the anticipated site: the lawn in front of the Pentagon building or "an equally appropriate place." Popularly known as the K-9 memorial, the project has so far not been endowed. It is hoped that construction will be financed by subscription, and it probably will.

ANNOUNCEMENTS

MILES L. COLEAN, editorial consultant to the FORUM staff has also established a private practice as consultant in residential construction and finance. His office is in the Transportation Building, Washington, D. C.

DE LEUW, CATHER & Co., engineers, have announced that Andrew N. Rebori has joined their organization as consulting architect.

G. McStay Jackson, Inc., designers, Chicago, announce the appointment of Richard V. Trusdell as head of the design department.

The architectural partnership of Janssen and Cocken has been dissolved as of December 1939. Since that time the practice has been conducted by, and after November 1944, will be continued under the name of William York Cocken, Century Building, Pittsburgh, Pa.

The Chamber of Commerce of Watertown, S. D. is seeking a young architect of good character and at least ten years experience who would be willing to establish a practice in that community. Applications should be sent to Box 783.

Jean Sabongi, 21 Soliman Pacha St., Cairo, Egypt, is desirous of representing American manufacturers of building materials and equipment of all types.

OPENING OF OFFICES

BEN SCHLANGER and MAURICE D. SORNIK announce the formation of a partnership for the practice of architecture with offices at 595 Madison Ave., New York 22, N. Y.

B. H. Whinston, architect, announces the reopening of his office at 465 Lexington Ave., New York 17, N. Y. after three years of work on war construction projects.

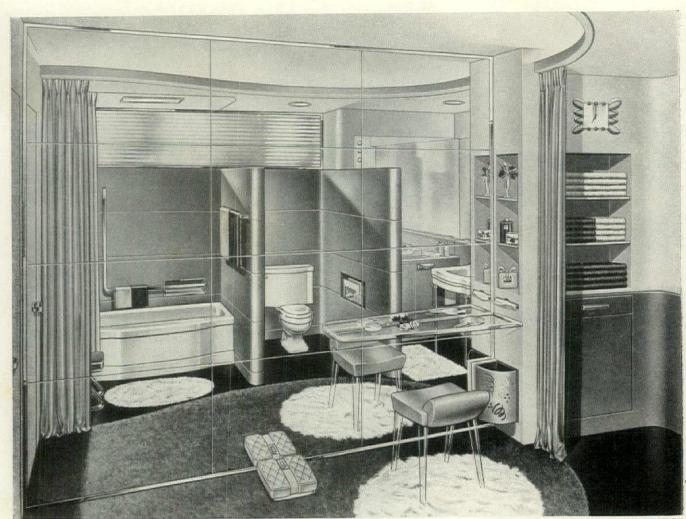
CHARLES FREDERIC WILEY and KARL R. SCHWARZ announce the establishment of an architectural office at 208 West Crawford St., Elkhart, Ind.

George W. Edwards announces the opening of his office for the general practice of architecture at 428 Irwin-Keasler Building, Dallas 1, Texas.

GILBERT G. SATRANG, architect, announces the reopening of his office at 3402 McFarlin Blvd., Dallas 5, Texas, after having served as architect-engineer with the US Corps of Engineers since 1942.

(Continued on page 84)







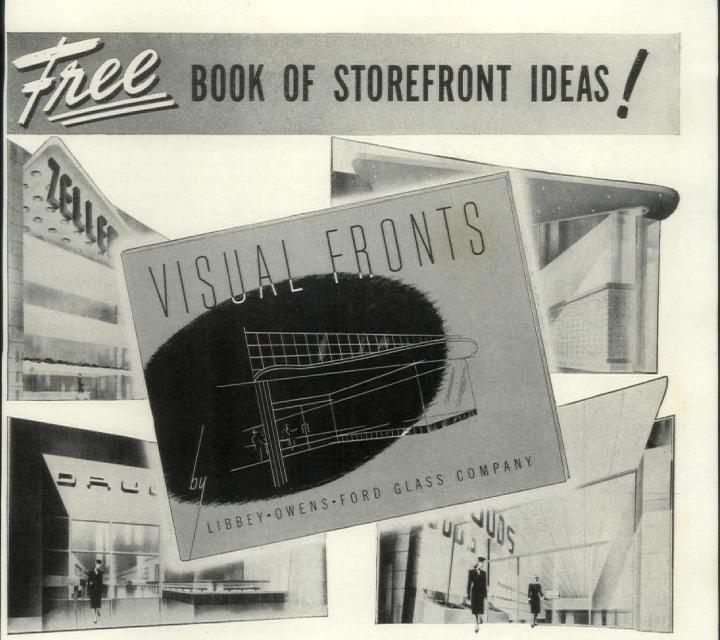
This advertisement, in full color, appears in: The Saturday Evening Post, February 3; House & Garden, March; House Beautiful, March

central curtain.

BONDS

Copr. 1944, Briggs Mfg. Co.

BRIGGS MANUFACTURING COMPANY, PLUMBING WARE DIVISION, DETROIT 11, MICHIGAN



How will tomorrow's business street differ from the years before the war? One outstanding feature will be the Visual Front . . . the storefront that uses glass to build store traffic.

Storefront designers have reasoned, "Why shut off from the view of passers-by all the color and activity of the store interior? Why not let the interior attract attention invite people in to buy?" They're answering that question with fronts of clear glass that eliminate the visual barrier between sidewalk traffic and the merchandise.

To help designers of postwar storefronts,

Libbey Owens Ford Glass Company has prepared a number of design suggestions for many types of stores. These sketches are shown in our new book, illustrated above.

This book is packed with ideas you can use to spark up the merchandising power of your clients' stores...ideas you can adapt to your design problems. It shows the many types of glass you can use to provide extra beauty and attract business.

Send for this book now. Write to Libbey Owens Ford Glass Company, 7125 Nicholas Building, Toledo 3, Ohio.



LIBBEY · OWENS · FORD

a Great Name in GLASS

for the asking



This new booklet of valuable hinge information has just been compiled and published by McKinney. It contains detailed diagrams of various types of hinges, important tables of dimensions and clearances, proper type hinges for wood and steel doors, and other hinge data you will want to keep. Your copy is ready. Use the coupon.



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FORUM OF EVENTS

(Continued from page 80)

SEBASTIAN J. TAURIELLO announces the opening of his office for the practice of architecture, interior and industrial design. project planning and product development in the Jackson Building, 220 Delaware Ave., Buffalo 2, N. Y.

FRANKLIN T. GEORGESON announces the reopening of his office for the practice of architecture in Eureka, Calif.

CHARLES A. PEARSON, JR., architect, announces the opening of his office for general practice, city planning and industrial design in Radford, Va.

THOMAS K. HENDRYX, architect, has reopened his office at 165 Interstate P'kway, Bradford, Pa.

ARTHUR N. STAIRN AND ASSOCIATES have resumed the practice of architecture at North Finley Ave., Basking Ridge, N. J. MICHAEL BAKER, JR., The Baker Engineers, announces the opening of a branch office at 322 Healey Bld'g, Atlanta, Ga. CLARENCE O. PETERSON and WENDELL R. SPACKMAN announce their association for the general practice of architecture with offices at 604 Mission St., San Francisco 5, Calif.

HOWARD G. ELWELL, architect, is opening a new office at 1520 Wilshire Blvd., Los Angeles 14, Calif.

LAURENCE M. LOEB, architect, has resumed practice at 99 Mamaroneck Ave., White Plains, N. Y.

WILLIAM A. DEAN, town planner and landscape architect, announces the opening of his office at 75 East Wacker Dr.. Chicago 1, Ill.

GEORGE NEMENY, announces the reopening of his offices at 313 West 53rd St., New York 19, N. Y., for the general practice of architecture.

MARK ANTHONY, architect, has reopened his office for general practice at 635 Guaranty Building, Cedar Rapids, Iowa.

AARON G. ALEXANDER, architect, announces the opening of his office as consultant, primarily in the field of bank architecture. at 20 Exchange Pl., New York City.

BRYANT ELWOOD HADLEY and EARL CARLTON WORTHINGTON announce the organization of the partnership of Hadley & Worthington, architects, with offices in suite 515 Myers Building, Fifth St., at Washington, Springfield, Ill.

CHANGE OF ADDRESS

EUGENE F. STOPPER, architect, has located his office at 2112 Spruce Street, Philadelphia 3, Pa.

WALFRED ERICKSON, architect and engineer has removed his office to 2053 Watson Ave., Bronx 61, N. Y.

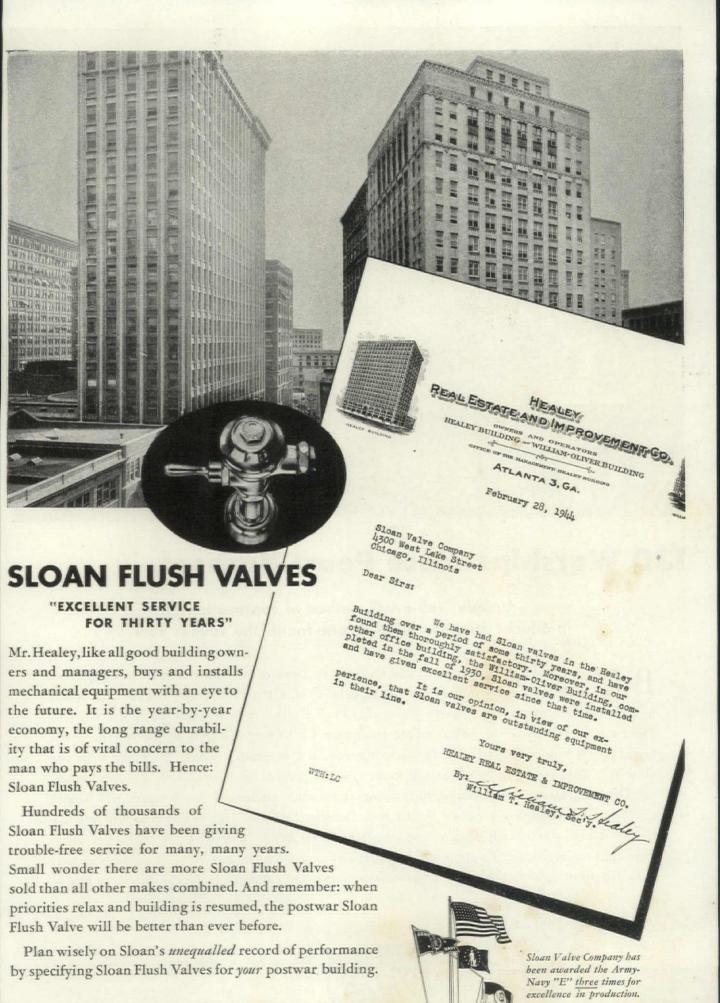
GEORGE F. ROOT, 3rd, announces that his office for the practice of architecture is now located at 101 Park Ave., New York, N. Y.

RAYMOND SIZEMORE, architect, and associates Tom B. KIRK-LAND and MILTON B. E. HILL have moved their offices to 16 South Hull St., Montgomery, Ala.

JOSEPH P. DAY CONSTRUCTION CORP., announces the removal of their offices to 1 Madison Ave., New York 10, N. Y.

THE HORSLEY Co., prefabricated structures, has removed its offices to 205 East 42nd St., New York 17, N. Y.

GREER-HOLMQUIST & CHAMBERS, architects, announce the removal of their offices to Room 401, Chamber of Commerce Building, Birmingham 3, Ala.



SLOAN VALVE COMPANY, 4300 WEST LAKE STREET, CHICAGO 24



130 Warships Since Pearl Harbor!

Unique "roll-over" method of construction produces stronger hulls at one-fourth the former cost

BY BUILDING warships upside down and then rolling them over in their cradles for completion, Defoe made construction history in speeding delivery of 130 fighting craft—from PC Subchasers to 1700-ton Destroyer Escorts—to the Navy, after Pearl Harbor. $\star \star \star$ Until the Axis is defeated, Defoe's facilities will be devoted to all-out production for Victory. For only by the continued and united efforts of industry and labor in producing more war materials—and of the public in buying more War Bonds—can we bring this war to the quickest possible conclusion. $\star \star \star$ After Victory, the Defoe organization, in addition to building yachts and commercial vessels again, will launch an even more important program by the new Housing Division. This department will produce quality homes, scientifically designed and built for permanency. $\star \star \star$ In applying war-taught techniques to large-scale peacetime manufacture, Defoe will take its place with leaders of industry in helping provide higher standards of production, living and employment for the American people.

DEFOE SHIPBUILDING COMPANY

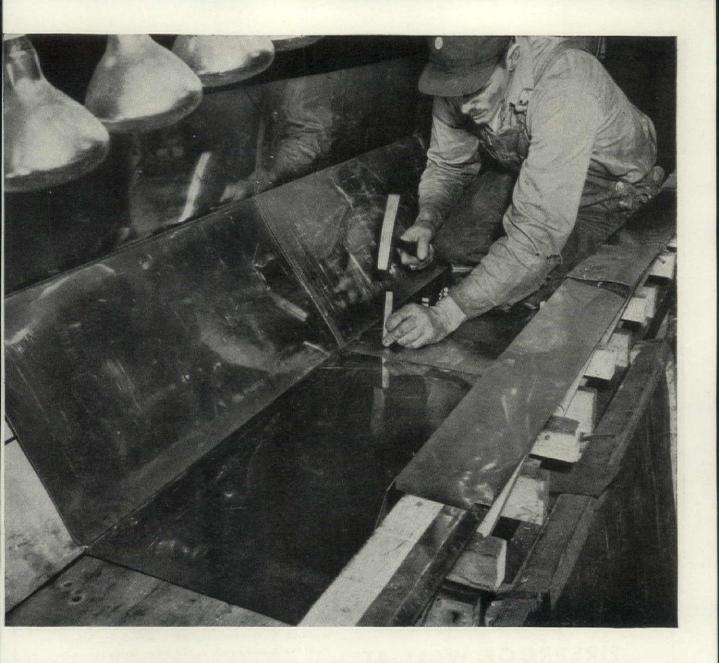
Defoe

BAY CITY, MICHIGAN

Four White Star Renewal Citations now decorate the Navy "E" Award won by Defoe workers.

SHIPS FOR VICTORY SERVANTS FOR PEACE

BACK THE ATTACK -BUY WAR BONDS



THE PICTURE IS FAMILIAR, BUT THE FACTS ARE NOT

To any architect and contractor this picture will appear familiar. But the fact is, it was taken in the Sheet Metal Research Laboratories maintained at Rome, N. Y., by Revere. It shows the construction of a 65-foot gutter of sheet copper, a duplicate of an actual monumental installation. The bulbs in the upper left corner are 250-watt electric heaters. When the gutter was completed the current was turned on, and the metal heated. Then the current was switched off, and the gutter flooded with cold water. The temperature range was between 150 and 160 degrees. Repeated cycles of heat and cold compressed into a few weeks the service conditions of many years.

From these and other tests and experiments Revere discovered exactly what happens to copper in roofing installations, and revealed why certain hitherto mystifying failures had taken place. From this work we developed the principle of column strength, and, applying that principle, worked out the correct gauges and tempers, and the right ways to design and install copper to prevent buckling and assure the almost endless life that characterizes the copper on a great many old and historic buildings. In addition, we

found how to make repairs to faulty installations so they will give the same long service as new ones applied according to the new methods.

Thus, true engineering principles have been brought to the problems of copper roofing. These principles will be explained in detail, with many drawings and diagrams, in a new Revere booklet to be made available. On request we will put your name on our list to receive a complimentary copy when issued. Write the Revere Executive Offices.

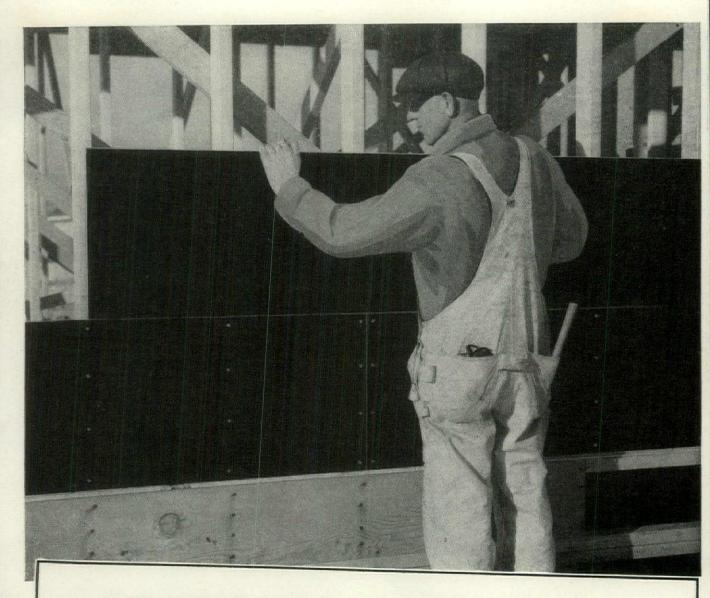
The Revere Technical Advisor Service, Architectural, is always at your command.



COPPER AND BRASS INCORPORATED

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FEBRUARY 1945



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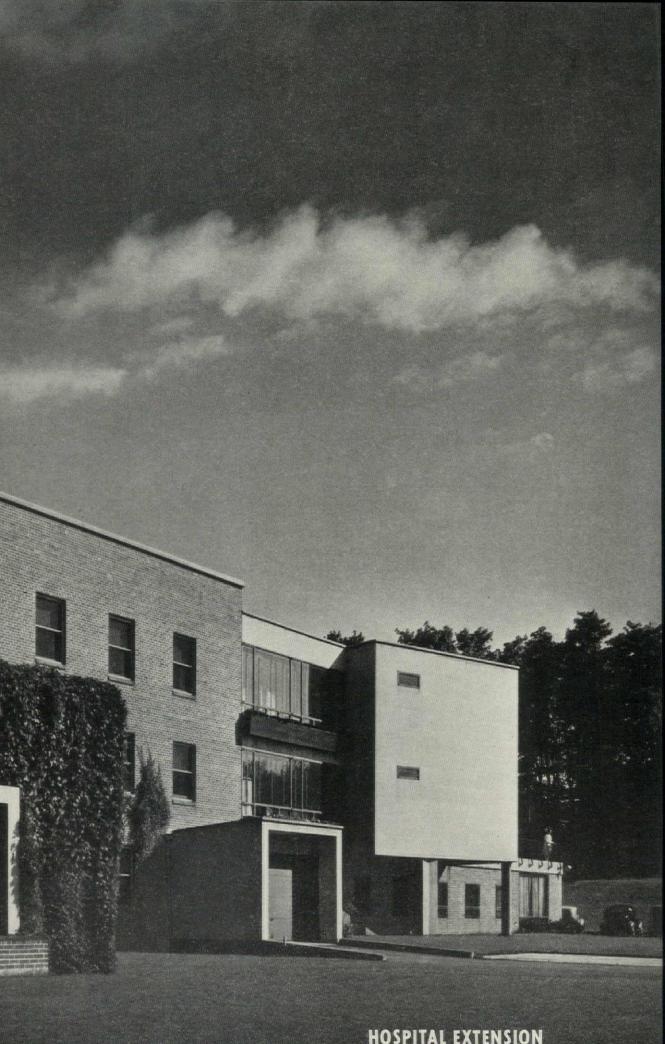
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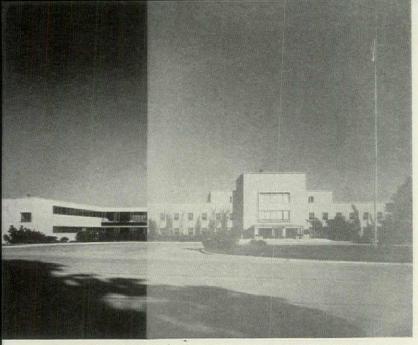
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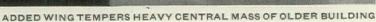
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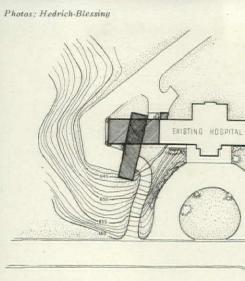
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Little Traverse Hospital, Petosky, Mich., gets a new wing providing a sun deck, enclosed solar much needed ward and clinic space. Elevated construction simplifies planning and fits the sit

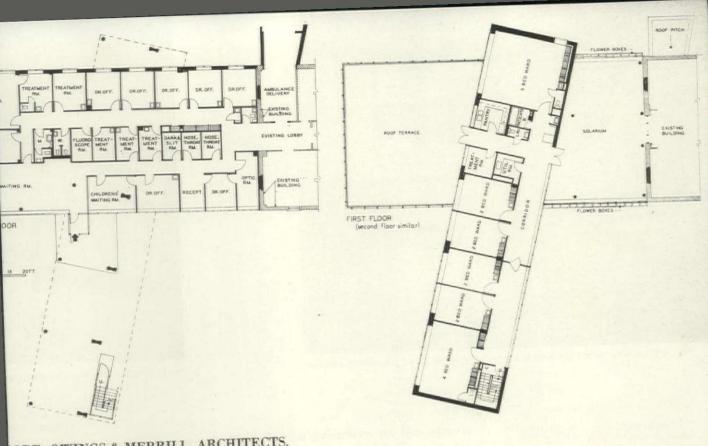
WAITING ROOM HAS EXPOSED BRICK WALL, GENEROUS GLAZING



The popular acceptance and rapid g Little Traverse Hospital since it open five years ago (see ARCH FORUM, N cently necessitated the addition of a wing designed by the original archi clinic facilities were needed as the expanding out-patient program and hospitalization arrangements in th area have created a demand for a gre of inexpensive beds, additional ward required.

The design of the new wing was de four major factors: orientation, terr bility of clinic facilities and the de the addition, the gift of a single donor as a separate entity. The site, a steep naturally adaptable to the elevated of the two upper stories, permitting rupted flow of motor traffic under th at basement level. Orientation is to the since the climate is cool and maxim is desired in the wards.

Any attempt to retain the original symmetry was ignored since such an a would have proven uneconomical an in operation. Only the clinic, which joins existing facilities in the base main building, was aligned. Its loca easy access for patients arriving by hospital staff members coming from basement or first floor of the main by two upper stories of the new wing are on the court side. The unobstruc which results from this construction ing to the management, noticibly re tenance and operating costs.



IORE, OWINGS & MERRILL, ARCHITECTS.





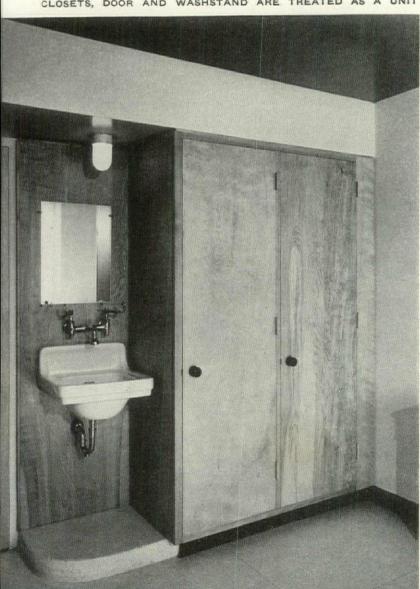
FULL-WIDTH WINDOWS ENHANCE THE NEW SEMI-PRIVATE ROOMS



CHILDREN'S WARD HAS ACOUS

Flush surfaces, high-quality materials and an extensive use of glass characterize the hospital interio

CLOSETS, DOOR AND WASHSTAND ARE TREATED AS A UNIT



The orientation of the main building was part determined by the desire to capitalize on an e cellent lake view, but the oblique position ar generous fenestration of the new addition al take advantage of this asset.

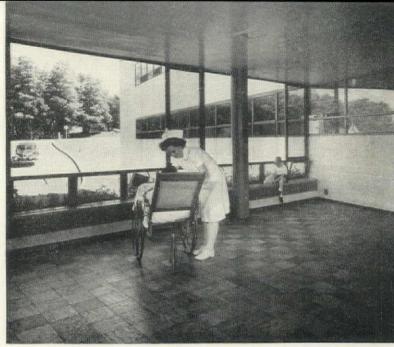
In rough analysis, the plan of the clinic grou treatment rooms, where natural light is more hindrance than a help, in a central bank. Doctor offices and public rooms occupy most of the ou side space. A children's waiting room equippe with special furniture, toys, etc., is separated fro the main waiting room by a large plate gla window. This reduces disturbance to a minimu and also facilitates parent's supervision of sma patients. A covered entrance was added to the ambulance delivery at the rear of the main buil ing, affording garage space for two vehicles.

On the ward floors, rooms are lined along or side of the corridor, away from the entrance cour This arrangement minimizes inside and outside noise and provides natural light from two side Standard awnings at all windows provide lig control. The attractiveness of the new wards ha put them at a premium over the rooms in the original building.

The design and location of the addition create two enclosed solariums and a large sundeck on the second floor. At first, the extensive use of gla in a cold climate such as that of northern Mich gan, was looked upon with disfavor by the loc residents. However, a year of operation has prove this criticism unfounded. Double glass, used certain critical areas, and proper design of the heating installation has kept costs down ar more than paid off in psychological benefits.

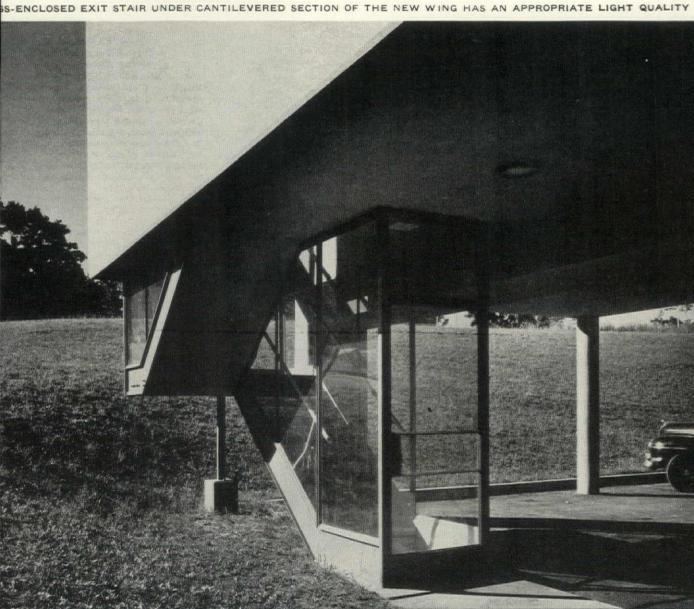


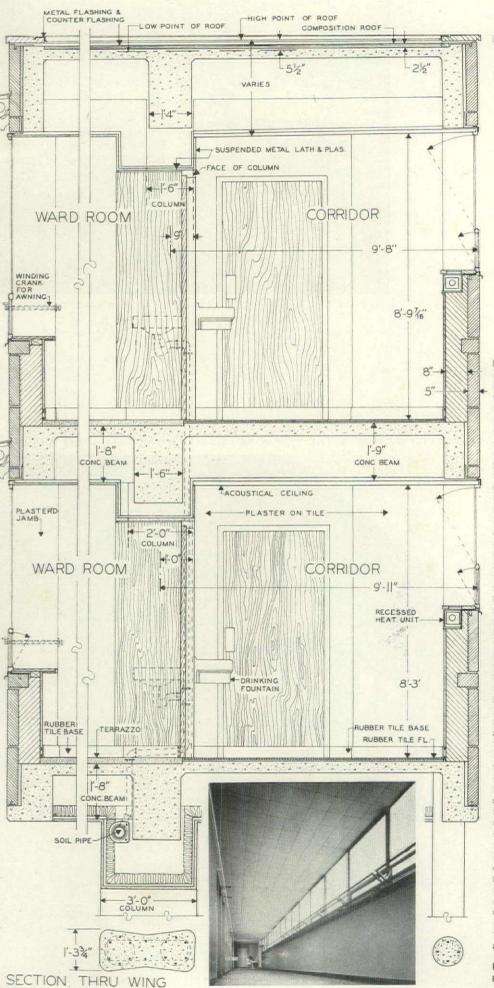
NG AND FURNITURE TO SCALE



TWO ENCLOSED SOLARIUMS CONNECT OLD AND NEW BUILDINGS

MORE, OWINGS & MERRILL, ARCHITECTS.





HOSPITAL EXTENSION

SKIDMORE, OWINGS & MERRILL,
ARCHITECTS

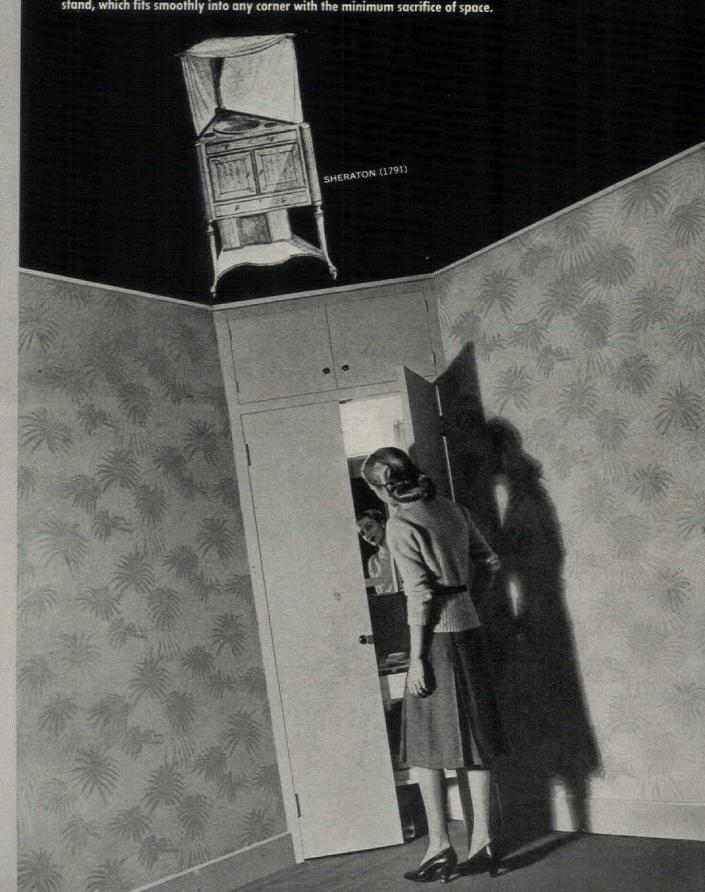
CONSTRUCTION OUTLINE:

FOUNDATION: Reinforced concrete. Portland Cement Association, reinforcing steel; Truscon Steel Co STRUCTURE: Exterior walls-Indiana limestone, brick and plaster. Columns-reinforced concrete. Floors -reinforced concrete, pan and joist. Ceilings - suspended metal lath and plaster. Interior partitions-Pyrobar, U. S. Gypsum Co. ROOF - builtup roofing, Johns - Manville. SHEET METAL WORK: 22-gauge galvanized iron. INSULATION: Roof-Masonite. Masonite Corp. Sound insulationacoustical plaster. WINDOWS: Sashsteel projected, Detroit Steel Products Co. Glass-double strength, quality A. and wire glass, Pittsburgh Plate Glass Co. Screens-16 mesh bronze cloth. STAIRS-steel pan with concrete fill. FLOOR COVERINGS: Corridors-rubber tile. Wards and rooms-terrazzo. Solarium-Haskelite plank, Haskelite Mfg. Co. Utility rooms-ceramic tile. WOOD AND METAL TRIM: Metal-Metal Door & Trim Co. Interior doorsflush wood, Carnahan Mfg. Co. Ambulance entrance-Crawford Door Co. HARDWARE: Yale & Towne Mfg. Co. PAINTS: Walls-3 coats enamel. Ceil-Trim-wax finish. ings-calcimined. Sash, interior and exterior-1 coat lead and oil. ELECTRICAL INSTALLA TION: Wiring-black rigid steel tubing, General Electric Co. Switchesflush toggle type, General Electric Co. Fixtures-Jewel Mfg. Co. and Perfectilite Co. Special Equipment-nurses' signal system, Edwards & Co.; house telephone system, Automatic Electric Co. PLUMBING: Fixtures-James B. Clow & Sons. Soil pipes-cast iron. Branch wastes and vents-wrought iron or extra heavy cast iron. Hot and cold water pipes-galvanized steel. HEATING AND AIR CONDITIONING: Heating-forced hot water circulating system. Radiators - convectors and unit heaters, The Trane Co. Grillesstamped steel, Hugh Baker & Co. Valves-Crane Co. and American Radiator-Standard Sanitary Corp.

GENERAL CONTRACTOR: Leslie Colvin, Indianapolis, Ind.

CORNER LAVATORY

Family privacy is reinstated by this lavatory-dressing unit, a modern counterpart of the Victorian bedroom washstand, which fits smoothly into any corner with the minimum sacrifice of space.

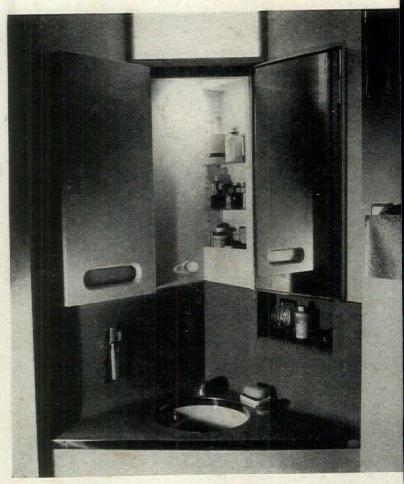


Before hot and cold running water became an accepted fact of life, the bedroom washstand was considered a necessary adjunct to living. Today, any impatient householder, waiting his turn at the streamlined modern bathroom, is apt to think the Victorians had a pretty good idea. While many families regard an extra bathroom as the solution, in many cases its cost is prohibitive or space for it is unavailable. On the other hand, the thought of an ordinary washstand jutting starkly from a bedroom wall has so far scotched any trend toward combining bedroom and bath. The Corner Lavatory is an excellent answer to this dilemma which solves the problem by providing a longdesired convenience minus its former drawhacks

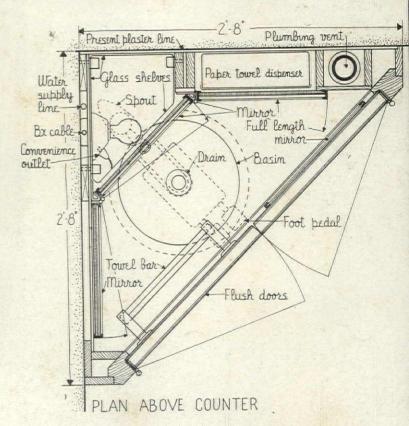
Based on the obvious premise that every room has four corners, space for the lavatory ceases to be a problem. Utilizing an otherwise wasted corner, a ceiling height cupboard placed flush with the adjoining walls conceals the unit when it is not in use, but removes only a small wedge from the room. The three-cornered shape provides space ideally adapted to washing and permits a built-in triple-mirrored medicine cabinet above the washstand. Below the stand a shelf provides storage for soap flakes, cleanser and other bathroom items too large for the cabinet. A full-length mirror on the inside of one door and rods for towels on the other complete the facilities for bedroom washing and dressing. Storage for linens is provided in an overhead cupboard section.

One of the most important aspects of the Corner-Lavatory is its simplicity of installation, easily handled by any plumber. Since the space under the lavatory is left free, piping can be installed in either wall. Waste can be carried directly down through the wall to the basement and connected with the existing drainage system, while vent piping is carried up to connect with the attic vent, or directly through the roof. In one-story basementless houses connection is even easier, since pipes can go directly through floor and ceiling without the necessity of concealment. Because of the freedom possible in making connections, piping can conform to the peculiarities of any specific installation.

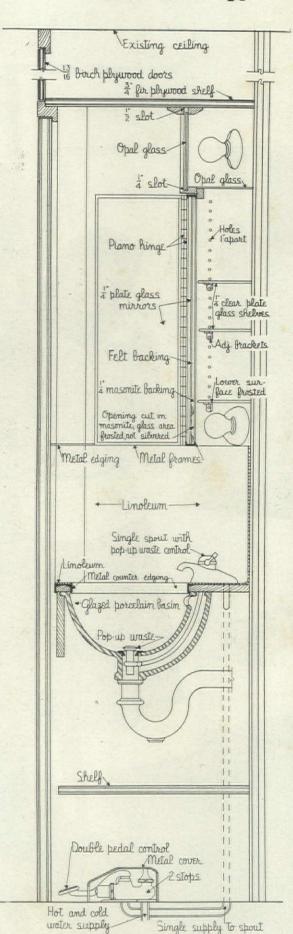
Since it is a unit complete in itself, the Corner-Lavatory is ideally suited to prefabrication. It can also be carpenter-built on the job. Washstand, cabinets, cupboards, mirrors, shelves, towel racks, lighting and simple plumbing connections have been smoothly planned into one package. Equally adaptable to both old houses and new construction, it will be best launched, like all new ideas in building, by application to both.



Detail shows mirrored, triple-doored medicine cabinet and recessed space for dri ing glass above lavatory. Right hand mirror conceals paper towel contain



CORNER LAVATORY 7



SECTION THRU WASH BASIN



Well-organized planpermits maximum amount of equipment without crowding. Lighting panel illuminates cabinet through open top.

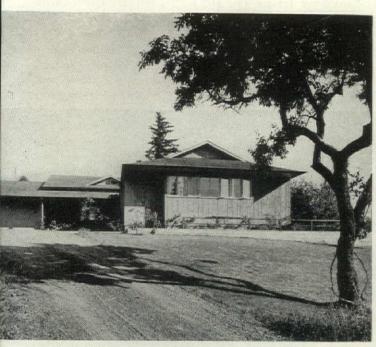


Towel rods placed on back of door are easily accessible. Shelf beneath washstand provides convenient storage for soap flakes.



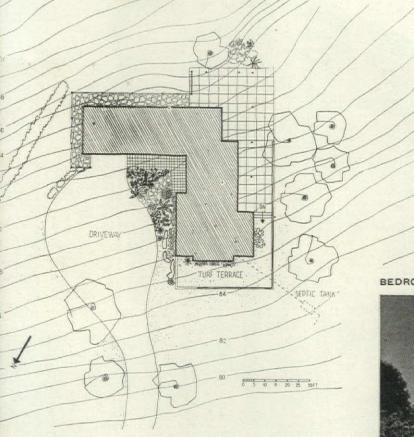
tory-cuphoard, permits efficient organization of equipment within the unit. Feb 145

HOUSE IN PORTLAND, ORE. Designed for pleasant outdoor living in a mild clin





SERVICE WING AND BEDROOMS HAVE SMALLER WINDOWS ON NORTH SIDE. ENTRANCE IS APPROACHED UNDER CA



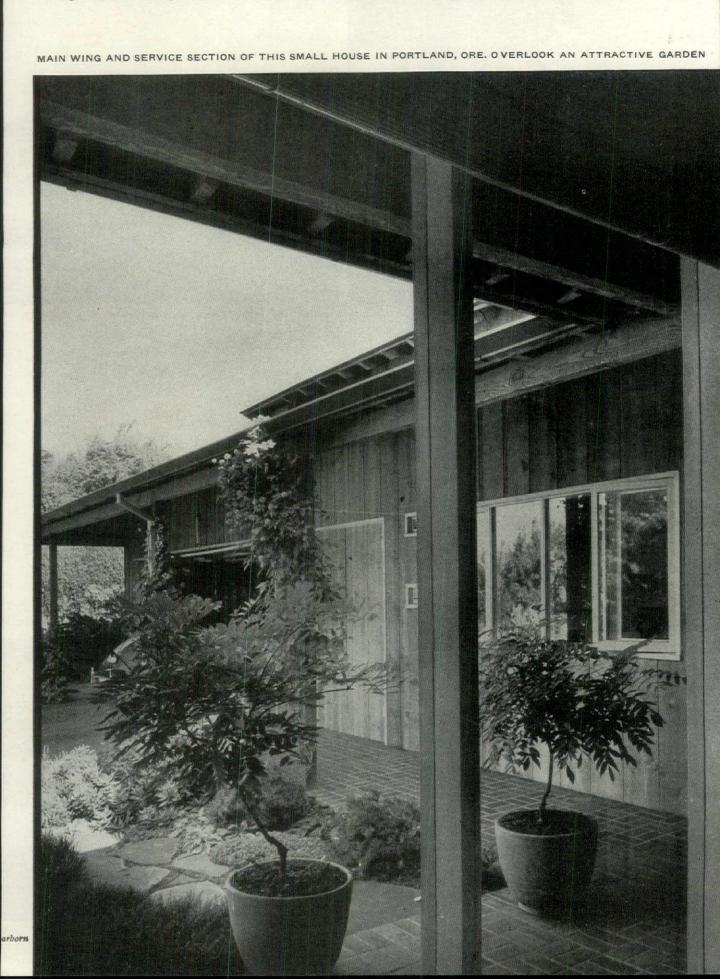
BEDROOM WING OVERLOOKS TERRACE RAISED ABOVE



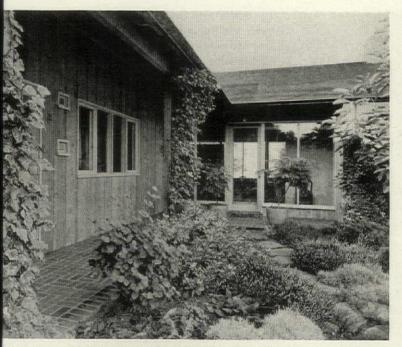
P. A. Dearborn

HOUSES

An open plan for indoor-outdoor living (p. 102) . . . An architect-built cottage in Florida (p. 106) . . . Modern in rustic dress invades New England (p. 108).



tect Pietro Belluschi's rough pine exteriors wed house and garden, adding charm to a well-knit plan.



VINE-COVERED POSTS EMBELLISH BRICK PATH OUTSIDE KITCHEN

Overlooking the beautiful Tualatin Valley, this small house is set on the crest of a hill in three acres of old apple orchard. It was designed to make the most of the view, to preserve the trees and to create a feeling of space by very open planning. The general effect of rural simplicity was heightened by the use of natural woods—vertical rough pine siding for the exterior walls and birch plywood, spruce and hemlock for the walls and ceiling of the living room.

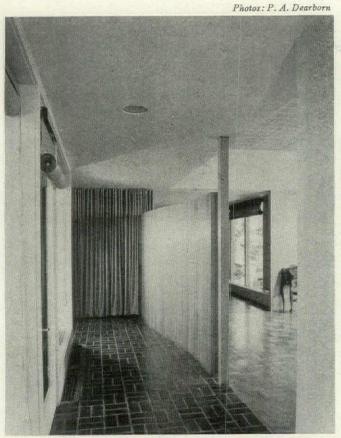
The L-shaped plan with its gently-sloping roof line is ideal for both indoor and outdoor living in the comparatively mild climate of the North-West. A wide overhang off the living and dining rooms provides a long sunny porch for meals and relaxation, with the pavement extending beyond to form an open terrace. All the main rooms open onto this outdoor living space.

The entrance also contrives to give an outdoorindoor effect. The covered approach is along the side of the service wing and the door itself is of glass, set in a glass screen. It opens onto a connecting passage, instead of into the living room itself, adding much to the privacy and convenience of the ground floor plan.

OUTDOOR LIVING DINING AREA IS SKILFULLY JOINED TO THE HOUSE BY EXTENDED ROOF AND WELL PLACED DOORS



HOUSE IN PORTLAND, ORE. Varying use of brick, wood finishes and fabrics makes interesting ter



CURTAIN AND WOOD SCREEN FORM SERVICE PASSAGE

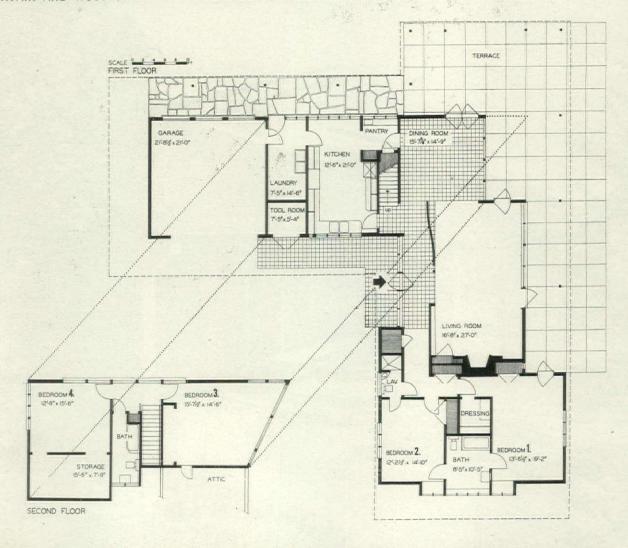
The unobtrusive second floor of this house is more easily studied in plan than in the photographs. Two bedrooms and a bath are installed over the kitchen wing, forming the shallow gables which give the elevations their individual quality. To accommodate this upper floor, the service wing was given a lower ceiling than the rest of the ground floor area—an arrangement which works out nicely since it makes possible a higher ceiling in the living room.

There is no basement. The first floor slab is concrete placed directly on the ground. The gas-fired boiler, automatically controlled, was installed in the attic.

CONSTRUCTION OUTLINE:

STRUCTURE: Exterior walls—vertical pine, studs, wood lath and plaster. Floors—brick, asphalt tile and wood parquet. Ceiling—textured spruce and hemlock in living room; remainder plaster. ROOF—cedar shingles. INSULATION: Ground floor—6 in. Unifil, Universal Zonolite Insulation Co. SHEET METAL WORK—galvanized iron. WINDOWS: Sash—fir. Glass—crystal plate, Pittsburgh Plate Glass Co. WOODWORK AND DOORS—fir and birch. HARDWARE—Sargent & Co. LAUNDRY EQUIPMENT: Washing machine—Bendix Home Appliances, Inc. HEATING—hot water system. Regulator—Minneapolis-Honeywell Regulator Co.

GENERAL CONTRACTOR: Dan Schuh, MECHANICAL ENGINEER, J. Donald Kroeker.



rns on floor, wall and ceiling surfaces of the freely planned and comfortable interiors.



FROM DINING ROOM SHOWS CHANGE IN CEILING LEVEL



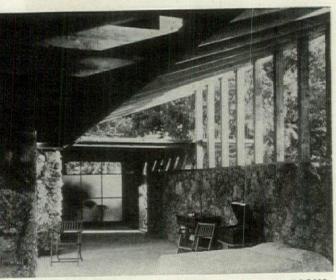
CONCRETE SLAB BECOMES FLOOR OF OUTDOOR AREA



HOUSE IN MIAMI, FLA. Lt. (jg) Alfred B. Parker, USNR uses his spare time and inexp



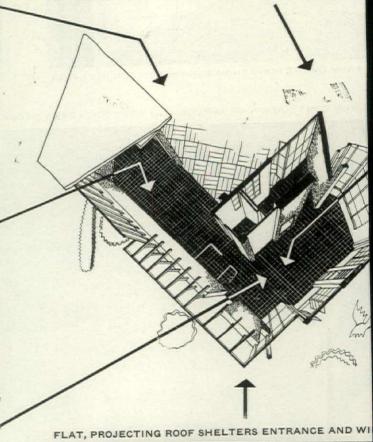
ROUGH MIAMI OOLITE FORMS WALLS AND CHIMNEY



RAFTERS ADD VARIETY TO BED AND LIVING ROOMS



ROOF-HIGH LIVING ROOM WINDOW IS ODD-SHAPED, PL

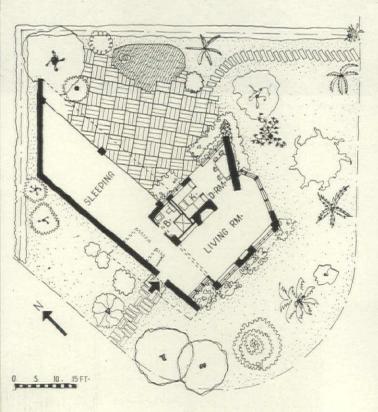




materials to build himself a wartime home and put his architectural theories into practice.



RGE GLASS AREAS ARE BUILT INTO THE LIVING ROOM AND PREVENT STONE WALLS FROM BECOMING OPPRESSIVE

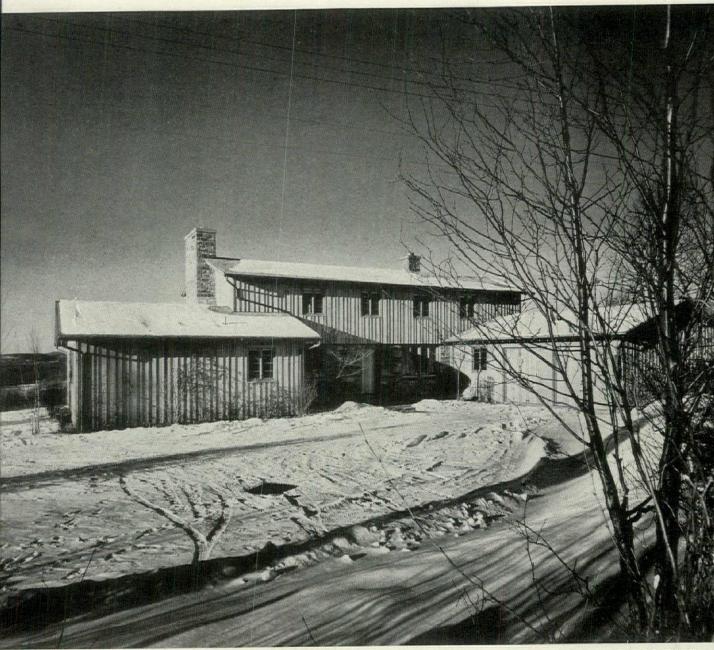


Wartime difficulties in housebuilding were no deterrent to this young architect and his wife, who acted as their own designers, carpenters, masons, electricians, plumbers and laborers. With an authorization of \$200 they boldly started construction, using stone from an old building on the site, tropical hardwoods ferried over by friends from nearby keys, and other materials salvaged from houses torn down to make room for a nearby airport. Taking their time and with attention to every detail, including the construction of furniture, the couple completed their modern home with only one other \$200 permit, obtained in the second year of construction.

The house has many unique features. It is cleverly adapted to the lot, with high windows facing a main traffic artery and trees protecting the large glass areas on two other fronts. The plan is open, in all senses of the word, since the climate enables the living space to be integrated with the outside. In every room structural materials take the place of interior finishes. Adroit use of obscure glass provides abundant light without hampering furniture arrangement.

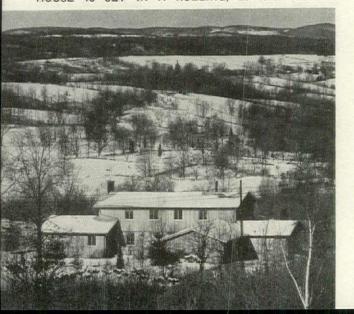
HOUSE IN BROOKFIELD CENTER, CONN. Separation of family, guests

Photos: Richard



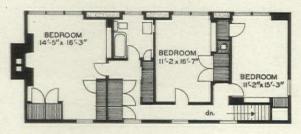
RANDOM-WIDTH VERTICAL BOARDS AND BATTENS COMBINED WITH FIELDSTONE WALLS ADD TO EXTERIOR FINISH





quarters ensures privacy and economy of operation in a house for occasional or permanent occupancy.

LCOTT AND TALCOTT, ARCHITECTS



OND FLOOR

Providing for changes in family size through the years, the architects of this attractive stone and wood frame house planned it as a series of separate elements. The general scheme consists of a living room-kitchen core, to which is added family bedrooms on the second floor, servants quarters on the first floor east, and a guestroom on the first floor west. These are widely separated for privacy, and the house can be operated with any or all of the additional elements in use. Piping for each bathroom can be drained individually. When the house is used for winter weekends the owners open as many rooms as are needed. The guest room is equipped with folding beds and is also used as a library.

The house is easily operated without servants.

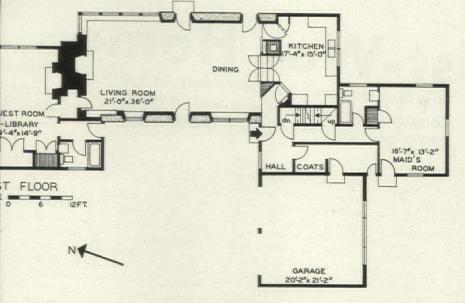
The house is easily operated without servants. There is no kitchen door, all deliveries being made by the main entrance. Provision for self-service is made by sliding doors and a two-way cabinet between kitchen and dining areas. The arrangement is also convenient for serving meals on the porch.

CONSTRUCTION OUTLINE:

STRUCTURE: Exterior walls - Western red cedar; inside - furring strips, studs, wood sheathing, asphalt saturated felt, Bird & Son, Inc. and oak plywood, U. S. Plywood Corp. INSULATION: Outside walls-Balsam Wool, Wood Conversion Co. Attic floor-mineral wool, Johns-Manville, WINDOWS-Andersen Corp. Glass-single strength, Libbey-Owens-Ford Glass Co. KITCHEN EQUIPMENT: Range — Universal, Landers, Frary & Clark. Refrigerator - Frigidaire Div., General Motors Sales Co. BATHROOM EQUIPMENT

—American Radiator-Standard Sanitary Corp. HEATING-warm air system, filtering and humidifying. Boiler-Holland Furnace Co. Burner-Quiet May, May Oil Burner Co. Regulator - Minneapolis-Honeywell Regulator Co. Water heater-Timkin Silent Automatic Div.

CONTRACTOR: Robert J. Martin, Brookfield Center, Conn.



BUILT-IN BOOKCASES AND BROAD CORNER WINDOW ARE FEATURES OF LIVING ROOM PANELED IN OAK PLYWOOD





FEBRUARY 1945



STANDARD CONSTRUCTION. If you're planning to build or buy a new home right after the war, this house is typical of what you should be able to get for So,000

Your Post-War Home

It will cost about \$6,000 to buy or build a standard construction house. If you wait a few years, you may get a prefabricated house for as little as \$1,500.

By Sgt. GEORG N. MEYERS YANK Staff Writer

F you're figuring on building or buying yourself a new house right after the war, you'd better forget about it unless 1) you've got \$6,000 socked away or 2) you're going to have a job paying you at least \$46.15 a week.

That sounds rough after all the fancy chatter you've been hearing about lowcost post-war housing, but it's the straight dope, based on questions put to the editors of the Architectural Forum and Better Homes and Gardens, the presidents of two home-loan banking outfits, a Federal Housing Authority administrator, a building contractor and Henry

J. Kaiser. All but two of these men agreed on one thing-the \$6,000.

That's the price they figure you'll have to count on paying for a four- or fiveroom house that won't fall in on you during the 20 years or so you'll be shelling out the monthly payments. And monthly payments are the only way most of us will be able to dish up the moneyeven if about 18 percent of all soldiers' pay is slapped away in War Bonds. There are few GIs who will be able to walk in and hand the man \$6,000 cash.

Another cheering outlook is that these housing experts say your \$6,000 house will be the same bungalow you could have picked up for \$4,500 before the war.

One man who waggled his head against the \$6,000 estimate was the president of the First Federal Savings and Loan Association of New York. He said you ought to be able to buy a fouror five-room house for about \$4,100 after the war. He recommended that I talk about price to a big multiple-housing outfit, the Castleton Housing Corporation. Edwin Wolf, Castleton's head man,

said \$6,000. Henry J. Kaiser, the same Kaiser whose ships you've been hitting the beaches in, wouldn't talk about price yet, but he predicts the housing industry will go in for mass-production methods after the war. He himself has announced plans to try out assembly-line production of livable homes, using gypsum instead of lumber. These houses might sell for 23 percent less than those of ordinary wooden-frame construction.

All the boys who are betting on the assembly-line house, however, admit that it won't come until some time later. How much later depends on the attitude of the building-trades unions and of the standard-construction contractors.

The pitch, then, is high costs on materials, labor and everything else-an over-all increase at present of 30 percent above 1940 costs. Why are the costs so high? How long may conditions stay that way? And what can an ex-GI who wants his own home do about it?

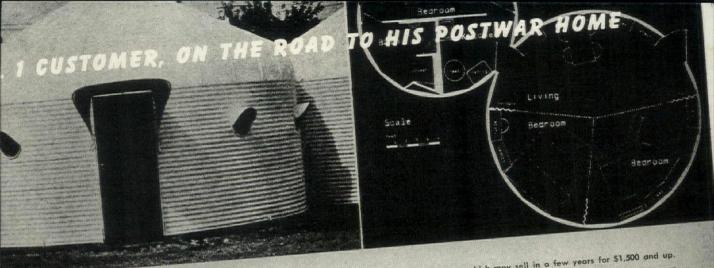
Costs will hang on at a high level because the priorities on materials wil be relaxed gradually as war needs thin down and because of the old angle abou supply and demand. In spite of all th yammering you hear about the folk back home spending their dough lik crazy, the people of the U.S. have tucke away \$130 billion for a rainy day, abou one-third of it in Government bond People with money like that are goin to want to buy a lot of things after t war that they could never afford before -like houses.

TLL be a long time before the bui ing industry's supply can meet t demand. Howard Myers, publisher the Architectural Forum, told a bu of builders and home utilities exp that if the war ended tomorrow it we take seven to 10 months just to enough men back into the lumber ca and enough wood out of the forests anybody even to start large-scale b

How long prices are going to high is anybody's guess, but the le guesses are getting the best odds.

What can you do, then, about b or building a house?

The first thing to do is to be Shop around. Don't let the firs talker who meets you at the gang give you a snow job about a m



FABRICATION. Buckminster Fuller's dymaxion house represents the extreme in plans for prefabricated homes which may sell in a few years for \$1,500 and up.

verlooking Lakeshore Drive, and don't et him work that old beauty about geting your power of attorney so you can deave all arrangements" to him. The woods will be full of these sharpers, so know your man when you start talking

When you think you've found the right house or the right plans for a house, ask yourself these questions about the location: Is it close to the bus or streetcar? How far away is a school for Junior? Is there a glue factory or rendering plant in the neighborhood, especially to windward? Will airplanes coming in for a landing or trucks on the highway keep you awake all night?

If you get satisfactory answers to all these, then take a good look at your pay check. Building experts and loan agencies calculate that if you're going to buy a house on a long-term payment plan, it should not come to more than 2½ times your annual income. Therefore, if your house is to cost \$6.000, you'll have to be pulling in \$2,400 a year—\$200 a month or \$46.15 a week.

Almost any house you buy will call for a down payment of at least 10 percent. On a \$6,000 house, that's \$600.

(Remember that a house on the East Coast may cost more than a house on the West Coast or in the Middle West, and a house in the Deep South may be cheaper than all of them. But the difference will not be great enough for you to change your plans about where you want to live after the war.)

Under provisions of Title III, Section 501, of the GI Bill of Rights (Servicemen's Readjustment Act of 1944), the Government is making it easy for you, as an ex-GI, to borrow enough money to buy or build a new home. Regulations

announced by Brig. Gen. Frank T. Hines, administrator of veterans' affairs, say that you should go about borrowing the money just as if there were no such thing as the GI Bill of Rights. That is, go to your bank, building and loan company, lending agency or individual lender and talk over your plans. If you're green at this kind of thing, see the Veterans' Administration first. They'll set you right.

If your potential lender considers that the property you want is suitable and of reasonable value, and that you can repay the loan out of your regular income, the lender himself will then get in touch with the nearest Veterans' Administration office. He'll check up on your eligibility for a loan and ask how much of the loan the Government will guarantee. The answer is that the Veterans' Administration will guarantee 50 percent of any amount you want to borrow, up to \$4,000 limit.

One thing for you to remember is that you will not be borrowing from the Government. The Veterans' Administration is simply saying that if you failed to pay back what you owe, Uncle Sam would have to cough up the \$2,000 that was guaranteed. For that reason, you'll have to be regarded as a good risk all the way around, and at the same time the Veterans' Administration and your lending agency are going to make it tough for anyone to put over a shady deal on you.

The Veterans' Administration will supervise the loan cases, and they'll check up on how trustworthy a character you are and whether the house you want is worth what you'd have to pay for it. You'll probably be able to swing at least \$2,000 more on top of the \$4,000 on your

own hook, if the Veterans' Administration decides you're any kind of a risk at all.

You'll probably never get to see the \$6,000. Your bank will pay the money to the man you're buying the house from, and from then on you'll be paying back the loan to the bank. You will be given up to 20 or 25 years to do this, depending on the outfit you borrow from.

OW hard will this paying back process hit you? Well, every month you will pay \$6.60 on every \$1,000 of your loan to cover a prorated part of the principal, interest and insurance. You've already made a down payment of \$600, so you are now paying on \$5,400, and 5.4 times \$6.60 is \$35.64 a month. Then you will have to pay the taxes on the property. In the East your taxes will come to about \$180 a year or \$15 a month. This added to the \$35.64 makes a total of \$50.64 a month, which is considerably less than the rent you'd have to pay on a good apartment in most large cities at current rates.

These calculations are based on 20 years of payment. For 10 or 15 years the monthly rate would be higher; for 25 years lower.

That's the financial picture if you're hepped on choosing your own home immediately after the war. It's a steep haul, and even the building industry admits you'll be paying a third more than the pre-war prices. (The present swollen wage scale of wartime may hang on for a spell, too, but probably not for anywhere near as long as it'll take you to pay off the mortgage.)

Suppose, though, you're willing to stick around for a few years before buying a house. Elmo Roper, the survey

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man, took a poll and found that 13.3 percent of all the families in the country have some hazy notion about owning a home after the war. That would mean about 4.700,000 houses. (The biggest number ever built in the U. S. in one year was 937,000, in 1925.)

Gen. Hines made a point of warning that you shouldn't rush into anything blindly, because you can apply for a loan any time within two years after you get your honorable discharge or the end of the war, whichever is later, but in any event not more than five years after war

If you have the patience to hold off for ump or umpteen years, some sections of the building industry promise you'll be able to own your own home for any amount you want to spend, beginning at \$1,500. And you can have your choice of the dymaxion house, the segmental house, the plank-panel house, the V-building, the house with no kitchen and the house with water on the roof. The air will be full of such terms as prefabrication, work center, modules, stress-skin tension, radiant heating and service unit.

The cheapest house yet proposed is the dymaxion house, designed by the engineer and inventor, Buckminster Fuller. It looks like an oil-storage tank with portholes and could sell for \$1,500. You build it from the top down by bolting together several petal-shaped roof sections and hoisting them up a mast. Then you hang the metal wall panels onto the roof, lower them onto a circle of bricks, bolt your steel floor sections to the bottom rim and move in.

REFABRICATION is the big ex citement, though Simon Breines, a New York architect, says it's nothing new; parts of buildings have been more or less prefabricated for many years. Not so long ago it was considered a big improvement when you were able to buy a factory-made kitchen cabinet, all in one unit. Breines has designed a 3-foot-4-in module, or standard panel, which you can use like the panels in Army field construction to build your house. One module is just right for the closet floor. Four square modules make a bathroom, nine a small dining room and 12 a bedroom.

Breines wants these modules and roofand floor-supports to be built like airplanes, on the principle of "stress-skin

tension." He's not alone in that wish, either. The United Automobile Workers have proposed that most of the country's wartime air-frame assembly plants be reconverted to the manufacture of units for low-cost prefabricated houses. The UAW estimates that three million men could be employed this way—an estimate that contradicts those who say mass-produced houses would throw a lot of men out of work.

Breines is also the fellow who figured out that if you build a flat roof with a little rim around it, then flood it with a thin film of water, you've got an overhead surface that reflects the sun's heat, thus keeping your house cooler in summer.

The innumerable quonset huts, Stout houses and K/D buildings that the Army has thrown up all over the world have proved the practicability of mass-scale prefabrication.

prefabrication. Norman Bel Geddes, the famous stage designer and architect, has worked out a house assembled from 27 basic units. The utility unit-a wall with all the kitchen plumbing on one side and the bathroom accessories on the other-can be stamped out by machine like an auto body. The house has no basement. It rests on seven concrete piers. Closets form the interior partitions, hold up the roof and make the rooms soundproof from each other. You can make 11 different houses from the same set of units, and six men can put up the house in one eight-hour day.

Bel Geddes' house is probably a sample of what all the prefabrication people are working toward. "Standard" features of all the factory-processed housing plans are walls with all wiring and piping inside, ready to be connected, great window spaces and mechanical dishwashers.

Harwell Hamilton Harris of Los Angeles has cooked up what he calls the "segmental house," described as "a means by which a young husband and wife can plan a house for their ultimate needs and achieve it gradually as their requirements and incomes increase." He suggests you invest in a 100-by-150-foot lot in a good location, then build a "basic house" of a small living room, bedroom, bathroom, kitchen with dining space and laundry and heater room. He figures you could put this part up for about \$3,350. Harris' plan of construction makes it easy for you to add rooms at a cost of about \$4 for every square

foot of floor space until you've got a mansion with a living room, dining room, service rooms, six bedrooms, four baths and several "garden rooms."

One big movement gaining a lot of followers in the building industry is the sale of the complete or "packaged" house. This means that some day you may be able to walk into a big department store, look at a selection of plans, and walk out as the buyer of a house that already has in it an electric stove, refrigerator, washing machine and several other pieces of functional furniture. The cost of the extra equipment would be spread out over the same period that you would be allowed for buying the house.

OR INSTANCE, in some more or less distant day, your monthly payment on a house might be \$35, including interest, principal, insurance and taxes. If you were to buy in addition a range, refrigerator and automatic laundry, paying for them separately, under the present-day 30-month installment plan, they would cost about \$15.80 per installment, which would increase your total monthly layout to \$50.80 However, under this new "packaged house" arrangement, your payments of the accessories would come to only \$2.3 monthly, making a total cost of \$37.38 month. In other words, although the cou of the extra equipment is no less, pa ment is easier in the smaller instal ments over a longer period.

Why aren't all of these houses at plans on the market today? The are two obvious reasons. The first, no urally, is the war. The other is that renough people have shown they are terested or able to buy mass-product houses. The building industries are a going to risk a lot of capital until they sure they can sell the houses by numbers.

That puts you, then, right back where we started—just out of the Army wanting a home. In fact, you're far back than that. You're not even out the Army yet.

But you can start planning now. It your eyes open. Look at houses or tures of houses whenever you go chance. Decide what you like. Your girl friend or your wife and her to be thinking about it.

For most of us buying a house be a lifetime investment. Don't m

BUILDING IN ONE PACKAGE

How The Austin Company solves some of industry's unique problems and applies the same approach to special buildings of all kinds.

The second of two articles.

In its forty years of engineering and construction work for a wide range of industries, Austin has come to consider the industrial plant as a tool of production in itself. In the process, the design of the complex organisms which make up modern industry has become more and more a matter of creative layout, less and less one of simply providing housing for a predetermined arrangement of equipment.

Plant layout problems tackled by Austin have almost always resulted in changes in the basic organization of production methods, so closely is design work keyed to plant operations. In the container, food and process industries, for example, the development of larger, heavier equipment has forced many firms to face a choice between the abandonment of existing multi-story plants with limited floor loading capacities and restricted column spacing, and continued operations under the handicaps imposed by outmoded equipment. In recent years container manufacturers who heretofore considered four-story plants the most efficient for their operations have been largely converted to one-story designs.

More than one manufacturer who agreed to let Austin develop a layout putting all operations on one floor discovered that modern conveyors can perform the required handling operations with greater over-all economy than the best gravity-flow layouts.

The differences between laying out efficient broadcasting studios or office and research buildings for industry and huge plants for the extraction of minerals from sea water suggest a range of problems that can be duplicated right within the metal working industries themselves. There, the basic considerations for the manufacture of tiny self-locking nuts by the billions are just as far from those encountered in a shop producing heavy machine tools or gigantic presses to special order as they are from organizing the production flow in a modern foundry or a mile-long bomber plant.

PLANT LAYOUT

Despite this range of differences, Austin approaches every layout problem with a three dimensional analysis in an effort to arrive at a fundamental flow diagram in which the problem is presented in its simplest form. Thus, in approaching the design of office buildings, the functional flow of human beings in respect to work areas is given first consideration. In planning radio or television, the facilities are designed first for effective broadcast production with minimum duplication of controls and equipment, and a maximum of convenience for staff personnel, performing artists and program audiences.

In most bulk process industries careful consideration must be given to the layout of piping and flow lines in a manner which will ensure efficient use of process steam and the economical disposal of waste. On the other hand, in food and packaging plants, sorting and shipping problems are often a controlling factor.

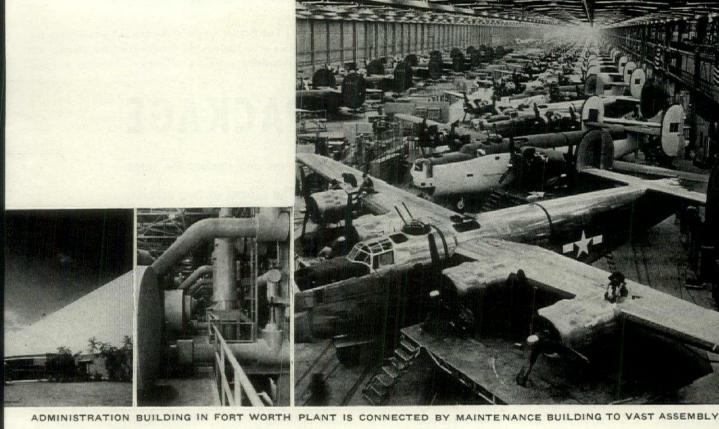
In mass production industries, layout becomes essentially a design for the effective coordination of production machinery, handling devices and manpower, in whatever way promises to be the most economical for transformation of raw materials or assembly of parts into finished products.

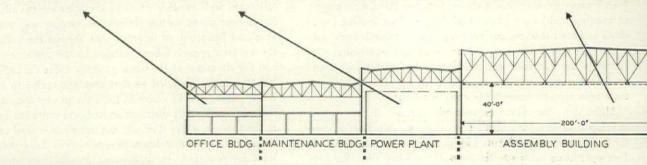
Removal from the working area of all activities not directly related to production itself is part of the three dimensional approach to layout. Locker rooms, rest rooms and toilets, as well as other employe facilities are usually located in sub-floor areas, on mezzanines, where they will not impede overhead handling, or in extensions around the perimeter of the working space. Where justified by the distances involved and the character of the work, tunnels under the factory floor are frequently installed so that employe traffic to and from job locations can be removed from the production area.

Piping and power distribution lines are customarily located in the trusses, where they will not impair overhead clearance, or nested between column flanges unless floor distribution lines are required. In such cases, trenches are employed to give ready access for service connections.

In the ideal approach to plant layout problems, all the restrictions imposed by topography or established highway, railroad and waterway approaches are ignored. When Austin is asked to design major additions to existing facilities which suffer from the inherent limitations of a confined site or uneconomic layout, they usually counsel a thorough re-examination of established methods in the interest of the greater over-all efficiency that could be gained by starting anew. The layout problems which the company encountered in planning for the coordinated production of saws, knives, files and other precision cutting tools were partly responsible for the adoption of a windowless design at the Simonds Saw and Steel Company plant at Fitchburg, Mass. There, by special ventilating and dust removal systems, controlled lighting, isolation of drop hammer and other equipment foundations, and the use of acoustical materials throughout the interior, they brought all of Simonds diverse working activities together in eight, selfcontained, parallel production lines. With raw stock at one end and finished stock bins adjoining the shipping department at the other, each line incorporates all of the equipment required for the manufacture of the related items in each major product group. In this way, each unit of production moves step by step along the line without any necessity for detours to special processing departments.

The heat produced by seventy-odd oil, gas and electric heat treating furnaces is trapped in curtained areas overhead and





PLANT LAYOUT cont'd

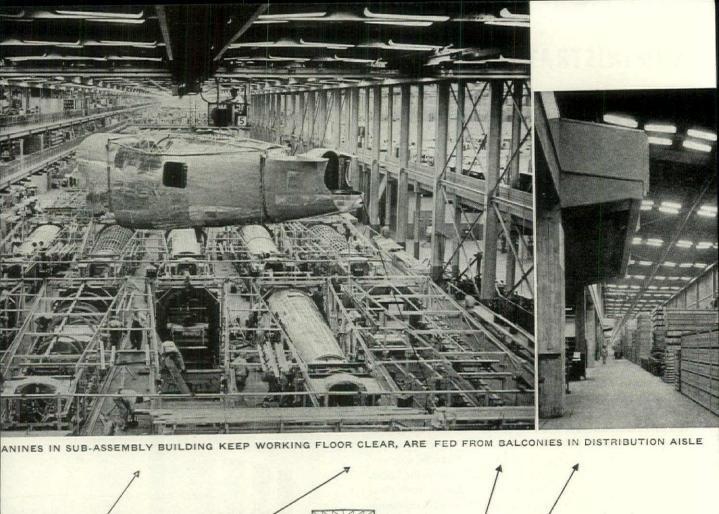
forced out through roof ventilators which exhaust used air from the plant-wide air-conditioning system, while furnace gases are carried off through exhaust tunnels under the floor.

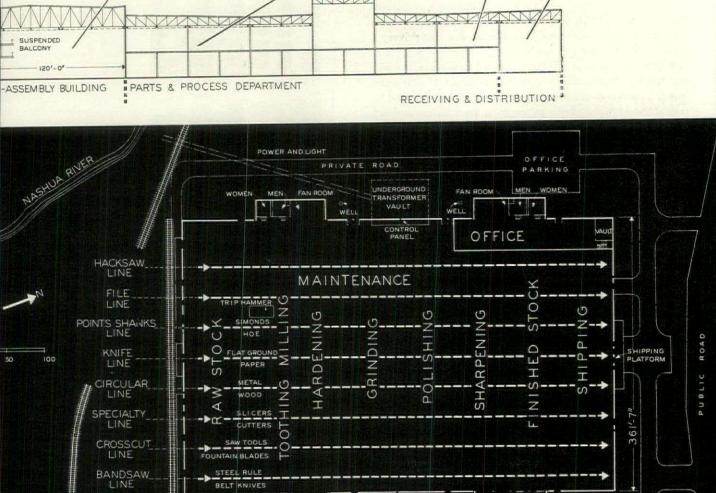
By carefully examining the requirements for every portion of each line with respect to floor space needed for the successive operations, the special ventilation and other services required, they ultimately arrived at a layout in which the parallel lines — despite their variable widths — meshed perfectly. Special process piping and service lines, as well as duct work, were held to a minimum. Where the noisier operations occurred special sound insulation was installed to prevent the building up of annoying intensities, and still permit the location of every piece of production equipment "in line," just where it belonged.

Over and above the economies reflected in production itself, Simonds was able to use this layout to eliminate departmental supervision and customary production controls. Instead, they placed a foreman in charge of each line and gave him full authority for the scheduling of production required to maintain the finished product inventory of each item within given limits. With all the raw stock and material in process open to the foreman's view as he supervises production on his line, there is no need for process inventories. Thus the layout of the building itself determines not only production-flow, but supervisory control as well.

ORIGINALLY AN ASSEMBLY PLANT with a 120 ft, distribution bay having double cantilevered mezzanines and a 200 ft. final assembly bay, each nearly a mile long, Consolidated Vultee Aircraft Corporation's Fort Worth plant, above, was enlarged into a fully integrated layout for production of four-motor bombers and transports by the addition of a huge two-story parts plant, some of which can be seen beyond the row of double columns in the sub-assembly building. Wider though not as long as the original plant, it about doubled total floor space. Salvageable steel and Fiberglas walls facilitated the expansion, while basic flexibility of the controlled-conditions structure with its plant-wide interconnecting monorail system, simplified layout changes. Steam generating, refrigerating, temperature control and power distribution equipment is concentrated in the power plant between the midpoint of the long assembly building and the two-story office and maintenance buildings, which also house engineering departments.

EIGHT PARALLEL PRODUCTION LINES in Simonds Saw & Steel Company's one-room 5-acre plant illustrate the coordination of metal-working activities obtainable in controlled-conditions plants. In each line all forging, heat-treating, sand-blasting, grinding and other work required to convert raw steel into finished knives, saws, files and other products follows in orderly sequence. By locating employe facilities and air-conditioning equipment in building extensions outside the production area and service lines under the floor, the factory area with its white floor, acoustical walls and roof and 100 per cent fluorescent lighting is reserved for the actual production operations.





" WELL

561'-5"

FAN ROOM

. . .

RECEIVING PLATFORMS 1 5

MAIN

WELL &

FAN ROOM

ADMINISTRATION BUILDINGS

Administration and executive office buildings designed in direct conjunction with industrial plants are treated as separate entities, except insofar as their location and architectural appearance relate to the solution of the total problem. Whereever possible, the site commanding the most advantageous view from major highway approaches and affording adequate space for convenient visitor parking is selected. Then by individualized treatment of the facade and entrance, Austin arrives at a design that will be in keeping with the surrounding production buildings.

In smaller establishments, where separate administration buildings are not justified, Austin endeavors to point up the architectural appearance of the entire plant through their approach to the office problem. The offices themselves are invariably located along the principal facade, frequently in two-story structures which effectively mask the irregularities of sawtooth or monitor roofs.

Entrances are designed for speedy handling of traffic, ease of maintenance and with a view to providing comfortable, restful and interesting surroundings for visitors to the lobby. Terrazzo, tile, marble or other easily maintained floor surfaces are recommended, with a janitor's closet nearby for mopping-up in bad weather. Vestibules are carefully designed to keep out dirt and drafts. In large plants, where the traffic is heavy, lavatories are usually installed directly adjacent to the lobby.

Austin has found that long narrow buildings with clear spans of fifty to sixty feet or more usually permit maximum efficiency and flexibility of office layout. Insofar as the layout itself is concerned all general work areas are usually free of permanent walls, with movable partitions wherever privacy is required for efficient functioning.

Where the executive offices are located in a separate building, special consideration is given to the design of connecting bridges, tunnels or other passageways. These are essential for free access between offices, engineering departments and production areas, regardless of weather.

General corridors and stairs are designed to handle concentrations of traffic during peak periods without undue congestion. With a minimum radius of four to five feet at all corridor intersections and with stairs wide enough to handle two-way traffic, many difficulties can be avoided. Passenger elevators are installed if there is more than one flight of stairs.

In designing special engineering buildings and drafting rooms Austin engineers place major emphasis on adequate distribution of light. This has led to the adoption of window-less designs in many cases. Elsewhere, daylight designs in which sawtooth and monitor cross sections have been super-imposed above general offices or other departments are utilized. Also, the company recommends the installation of air-conditioning, high-level illumination, and acoustical materials in offices and engineering departments, reflecting the experience of clients who have found that the added cost of such facilities and treatment is more than offset by the improved efficiency of their personnel.

Recessed fluorescent lighting is widely favored for general office areas, although some owners still prefer indirect fixtures. Where effective daylight is provided through skylights, sawteeth or roof monitors, photoelectric controls are used extensively for the operation of switches which turn electric lights on or off when the intensity of natural light passes a given level.



ENTRANCE DETAILS that combine company identification and weather protection are worked out in various ways, depending on the materials used and general design. Three of those shown below are architectural concrete, the fourth limestone.









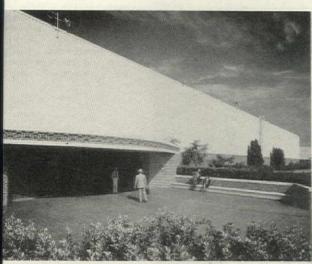
IOIS TOOL COMPANY has Austin-designed furnishings in execusuite, display rooms and lobby. Offices and engineering are on econd floor; research laboratories, lunchroom and other employe

facilities on the first. Venetian blinds in a 5 in. air space between double, fixed sash reduce the air-conditioning load, while glass panels in interior partitions and special color handling enhance perspective.



AIRCRAFT CORPORATION'S executive and business offices ocated on the ground floor of this air-conditioned adminison building which is surmounted by a flight control tower. Itsmen and engineers occupy the entire second floor, where hed plaster walls, glass block monitor enclosures, a susted metal acoustic ceiling and continuous fluorescent lightmake it hard to realize that the supporting framework is a dard Austin factory cross-section of the daylight variety.





SOLIDATED VULTEE'S administration building at Fort Worth a broad cantilevered canopy over the entrance to safeguard inst the possibility that light from the inside might be reted skyward if doors were opened during a blackout. An rage of better than 40 footcandles is maintained throughout drafting rooms and general office areas with fluorescent ffer lighting in recessed bands in the metal acoustic ceiling.



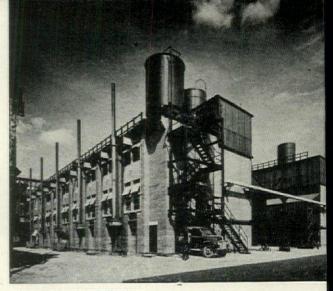
FOOD AND PROCESS PLANTS

Exhaustive location surveys covering from three to sixteen states are frequently the starting point for the design of Austin food, chemical and process plants. This is because the availability of fuel, power, waste disposal and transportation facilities has such an important bearing on production costs in industries of this type. When provided with a statement of immediate and ultimate service requirements, a basic flow chart, and whatever specifications the owner can supply, the company sometimes starts preliminary engineering before a site is finally selected. It analyzes the owners specifications in the light of its own experience, attempting wherever possible to speed up the operations, compact the layout, or improve control of the product—all of which will ultimately be reflected in operating economies.

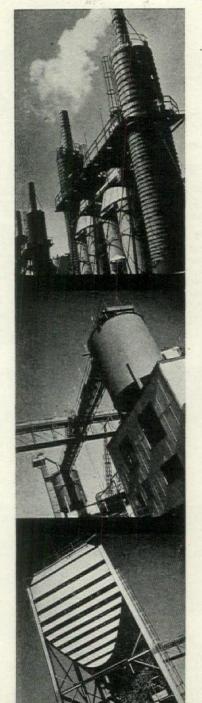
Familiarity with the design of welded structures has aided the company in the speedy completion of plants for the production of magnesium, Plexiglas, iodides and many other chemicals, and also in the attainment of more efficient designs and corrosion-resistant construction.

A good example of its approach to the architectural problems encountered in the process industries is the reasoning which led to the design of Church and Dwight Co. Inc.'s sodium bicarbonate plant at Syracuse. When the owners gave Austin the flow chart, showed them the existing plant and furnished the detailed specifications that were to be met within the limits of an irregular site, the problem was turned over directly to the staff of designers, structural, mechanical, electrical and process engineers, who suggested that circular reinforced concrete bins be designed to replace the square 250 ton steel bins originally specified for storage of dry soda. This was done to fit a site condition which called for location of one of the bins in a 70 degree angle, where the drive alongside a waste disposal pond entered the street. By using round bins, they could fit one into a curved corner and have the starting point for an interesting and functional building. As they analyzed the result and discussed it with the owner, it became apparent that the circular bins, if lined with stainless steel, would be just as satisfactory and much more economical than square ones.

While the confidences of every process flow chart are held inviolate, the Know How gained in meeting the exacting requirements in so many different process fields has enabled Austin to make original suggestions which might never occur to company engineers. It has experts in every district whose experience cuts across a broad variety of problems in food, pulp and paper, plastics, metal extraction and refining, pharmaceutical and other chemical industries. Its Know How includes first hand experience with all types of control instruments, pumps, handling devices, mixers and other equipment having uses in a wide variety of industries, plus an inventive turn of mind which is seldom stopped by lack of precedent. In the case of penicillin plants, for instance, where the maintenance of aseptic conditions and accurately zoned atmospheric controls were of primary importance, previous experience in the use of electrostatic precipitators, activated carbon clarifiers and germicidal controls proved of particular value. In other cases, by drawing on its accumulation of knowledge of different types of mechanical equipment and their efficiency under given conditions, the company is able to eliminate costly trial-and-error methods of installation.

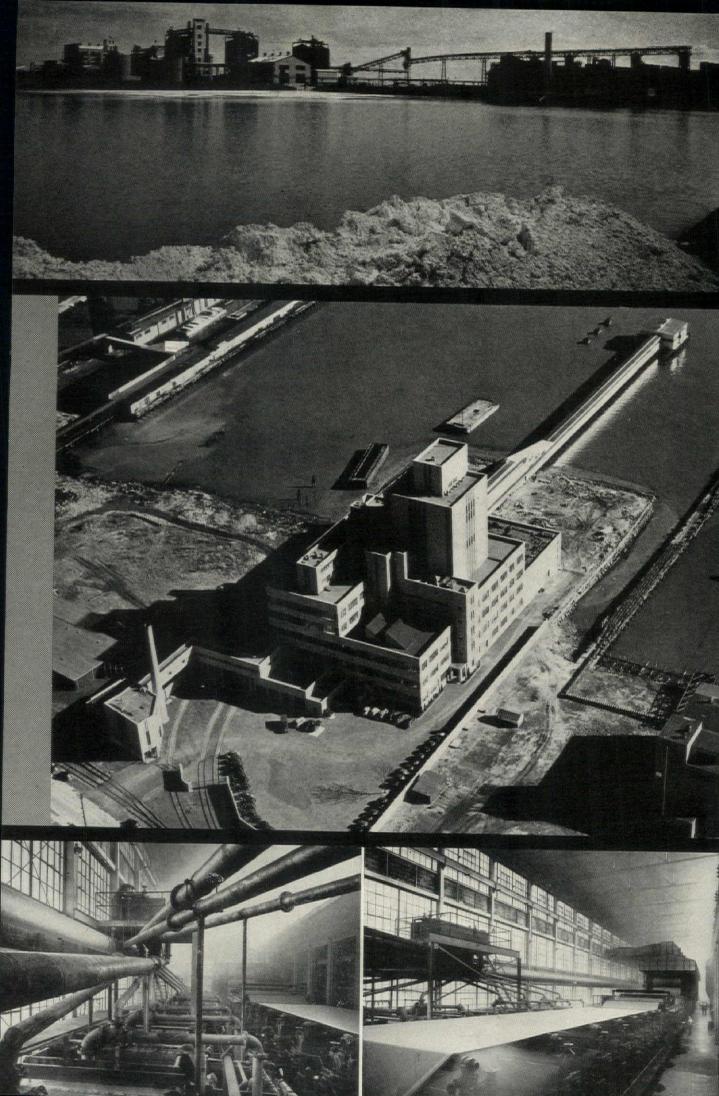


ELECTROLYTIC FURNACES in brick cell buildings at five Austin-b Dow-process magnesium plants are covered by record concentrat of bus bars. International Minerals & Chemical Corp.'s DPC pl partly shown beyond the waste pond, is smallest of three in Te All-welded equipment below is at Dow Magnesium Corp. in Michi



HILLS BROS. Coffee Inc.'s eastern plant on the Huc River has a 14-story welded mixing tower with handling and process equipment. Most of the p is reinforced concrete, face brick exterior. Gi coffee unloaded from bar to belt conveyors in the shed is stored in a wareho facing the river. Roas ovens in the 2-story p house to the left of the n ing tower feed directly grinding, packaging and s ping departments below. fices and employe facili are in main building at ri

clifton PAPER Board Copany converts waste painto paper board at a rate 250 tons a day in this mill dition where Austin sim fied process control and matenance by careful design process steam and flow liand access facilities for vice of equipment below machine. Small by compon with Austin - design pulp and paper mills in Pacific Northwest, its enomical structure is typi



EMPLOYE FACILITIES

In the design of facilities for the service and convenience of employes, Austin places major emphasis on those factors which conserve man hours and energy and lead to the efficient use of space.

From the standpoint of traffic handling, both at the approaches to and within the plant, they give consideration to every factor which impedes movement. While time lost in travel to and from work may not be the direct concern of employers, the company considers good highway approaches and efficient parking areas essential, since employes regard avoidable delays as a liability on any job. Where public transports serve the plant location, well-located passenger loading platforms with provision for waiting vehicles may be a major factor in the efficient handling of the concentration of pedestrians occurring at both ends of a shift. Concentration of employes within the plants also presents problems of circulation, and corridors beneath the working floor are becoming increasingly common.

In new plants the objective is to provide all of the required personnel conveniences in widely distributed locations directly related to the distribution of plant personnel. Whether these are placed on mezzanines, in basements or adjacent to the working floor, they can usually be located in a way which holds walking distance to a minimum without impairing the over-all layout of production facilities. In one huge controlledconditions aircraft plant, all of these employe facilities are housed in extensions around the perimeter opening directly onto the production floor. In long narrow plants where mezzanines are used for sub-assembly work, these facilities are concentrated directly below them adjacent to the main production floor, except for the lunch rooms and toilets required for those on the upper level. Where underground traffic corridors have been provided with stairs giving access to all parts of the production area, these facilities are located in basement areas. At two projects in the ore mines at Lake Superior, covered passages lead directly from mine-shaft elevator platforms to the change rooms, where the use of concrete floors, glazed tile and glass block permit daily flushing which keeps everything spotlessly clean.

Austin has designed, built, and equipped kitchens, restaurants, cafeterias and canteens now being used to serve more than half a million persons daily. They have found that careful analysis of the feeding problem is as important in small plants as large ones.

In the large new 1,800 seat cafeteria at Boeing's plant No. 2 in Seattle, wide span construction is used in the dining area, which is more than 200 ft. long. There a large supplemental food service center is located in the extreme south end of the plant area, the cafeteria being at the north entrance adjacent to the administration offices. Forty mobile hot food units are used in transporting meals to workers throughout the factory area.

Emphasis on the recreational value of cafeterias, meeting rooms and auditoriums has developed in step with programs for the education and upgrading of workers. With many such rooms equipped with projection booths, stages and screens, their use for recreation during those hours when they are not required for dining or training follows as a natural consequence. Such facilities will set the standard for comparable installations in thousands of civilian industries which have been unable to obtain the materials for such improvements during the war period.



PARKING FACILITIES at Boeing's Wichita plant include big ramp built over a busy roadway for the safety of employes arriving at the plant by busses. Plant protection and personnel buildings which adjoin the huge parking area, are shown at right center

TOILET FACILITIES in new engine plant include batteries of individual washbasins mounted on either side of chest-high partitions. Each employe has an individual locker. Typical locker room in Bell Aircraft plant (center) provides tables for recreational activity during lunch hours. In the Allison Engineering Division of General Motors (right) toilets are provided above lockers and wash basins and are approached by a stairway at rear

BRICK AND TIMBER STRUCTURE at Chicago plant operated by Douglas Aircraft Co. has redwood siding above windows forming structural awning. The building houses personnel offices and a large medical department. Main operating room (center) is elaborately equipped, as are the eight dispensaries. Interior view of typical dispensary shows treatment facilities for minor ailments

LAMINATED TIMBER ARCHES of 92 ft. span support roof of 1,800 seat cafeteria at Boeing Seattle plant. Acoustic tile ceiling is installed and stage at one end is used in plant entertainment programs. Food preparation in kitchen is largely mechanized.





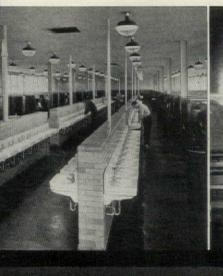
SONNEL BUILDING in Kansas plant pros lobby for job applicants. It has bankcounters, is air-conditioned throughout.



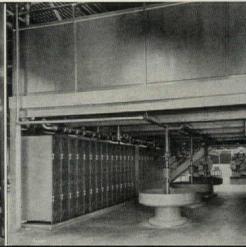
DIESEL ENGINE PLANT has time clocks in short service corridor leading to production area. Sidewalls are buff salt-glazed brick beneath high sash.



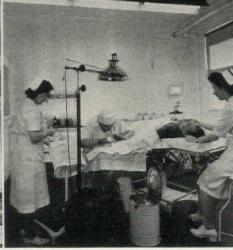
TUNNEL TRAFFICWAYS under Boeing's Wichita plant lead from parking lots to work area. This minimizes factory traffic.













ICH ROOM in basement of Bell Aircraft nt has four service counters, two at each t, to accommodate four lines of employes.

SEVEN CANTEENS around the perimeter of Oklahoma City plant provide employes with hot lunches. Cafeterias are also provided for non-manufacturing personnel.

MOBILE LUNCH UNITS serving hot foods move in trains through factory twice daily at Boeing's Wichita plant.

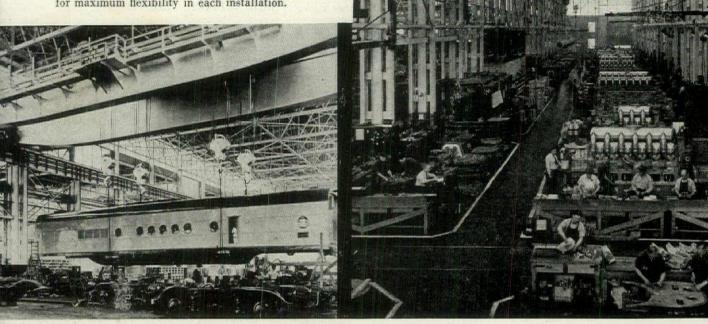






MATERIALS HANDLING

Since materials handling systems influence both structural design and layout at many points, Austin engineers survey all the loads to be handled and the relative efficiency of various types of equipment before they start actual design. Frequently locating scrap removal systems in underfloor trenches and conveyors for the handling of raw material in roof trusses, they use the third dimension to save both floor space and cubage wherever possible, and strive for maximum flexibility in each installation.

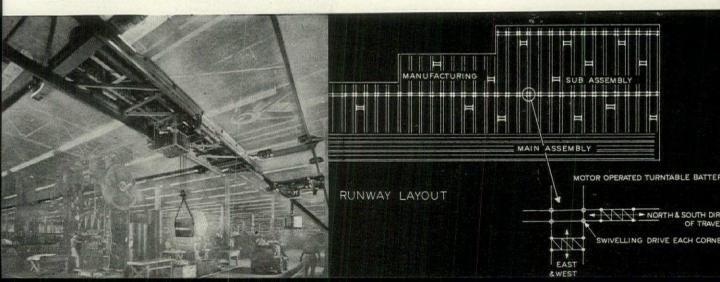


ELECTRO-MOTIVE CORP.'S 200 ton all-welded traveling crane, which operates on a 104 ft. span the length of its 1,100 ft. final assembly bay, greatly expedites the handling of all the large locomotive frames, under-carriages, etc., for switch engines and streamliners assembled here under modern production methods. First really heavy industrial plant to be all-welded, its 8 year performance under record moving loads has had far-reaching influence on the recognition of welding in building codes.

CRANE COLUMNS shop-welded on both sides of the 61 ft. building columns in this final assembly bay, of a large marine Diesel engine plant support 1½ ton capacity jib cranes as well as a number of 20 and 30 ton traveling cranes operating in this bay, a subassembly bay on the left, and an engine-testing bay beyond the brick fire wall which ties into columns on the right. Engines are transfered to the test bay on dollies over the track in foreground. Austin's standard 50 ft. trusses were used throughout.

MONORAIL BRIDGE GRANES with turntable switches installed along transfer aisles in the Army aircraft plants at Oklahoma City and Chicago, where Douglas Aircraft Co. Inc. produces C-47 and C-54 transports, make possible the handling of overhead loads in north-south as well as east-west directions. The bridge shown in the foreground (below) is moving east out of the transfer aisle into the press shop on the left. A second bridge in the background is moving north toward the camera in the transfer aisle with a crate picked up from the receiving department far to the west.

The runway layout shows how the motor-operated turntable batteries have been installed along two crane transfer runways extending through the manufacturing and sub-assembly areas where this flexibility is of primary importance. Swivelling drives are located in each corner of the bridges and throw the switches for transfer from one direction to the other when this is necessary. The long wide-span main assembly aisle has its own independent monorail system, necessitated by a difference in overhead clearance which precluded use of an interconnecting system.



SPECIAL PURPOSE BUILDINGS

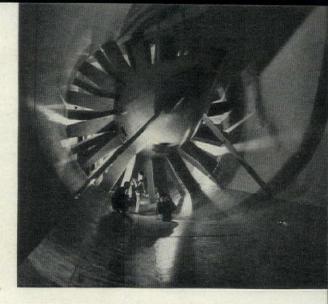
Some of the most interesting aspects of Austin's work are to be found in the field of special purpose facilities, which range from college research laboratories to huge military establishments. In the petroleum industry, for instance, they have handled everything from pipelines and pumping stations to service stations and the restaurant-hotels of the Pennsylvania Turnpike. They have also built a number of laboratories for all types of oil product testing and development work. These projects include chemical, physical- and engine-research laboratories, towers for pilot plant refinery experiments and various other facilities.

For other industries they have designed research buildings for Diesel engine, railway equipment, electric battery and lamp and steel companies. In building the American Rolling Mill Company's laboratory at Middletown they approached the design as an opportunity to demonstrate the adaptability of Armco products to a wide range of construction applications in a monumental structure built entirely of glass and steel.

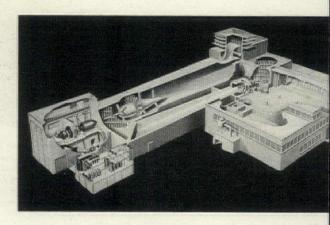
Research facilities for the electrical industries range from a single structure at one of Thomas A. Edison, Inc.'s battery plants to the extensive layout at Nela Park. Here, many individual structures of special design house highly departmentalized research, experimental manufacture, product testing, administration and demonstration facilities for industrial, institutional and home lighting installations.

As might be expected of an organization with such broad connections with the aviation industry Austin has been responsible for developing the plans of the aerodynamics research staffs of North American Aviation Inc., and Boeing Aircraft Company for large operating wind tunnels. Gaining early experience in this highly specialized field during the last war, when it erected what was then the world's largest experimental wind tunnel at Langley Field, the company is currently engaged in the design and construction of a fourth large wind tunnel for Consolidated Vultee Aircraft Corporation at San Diego. With the interior contours, operating speeds and other exacting details specified by the aircraft company own engineers, who originated many of the new mechanical controls for these projects, it has been up to Austin to guarantee smooth functioning of the tunnels, two of which required special precautions against earthquakes. In the throat and bell-mouth of the Boeing tunnel, where wind velocities approach the speed of sound, and a maximum tolerance of 1/16 in. was required, ingenious formwork and pouring methods were developed to solve the problem.

Their largest single wartime contract — one on which the company earned the Army-Navy "E" award for outstanding performance in the design and construction of war facilities—covered a great variety of special purpose projects spread throughout the states of Washington and Oregon. These included a number of airfields; air training stations; radio stations; fuel ammunition and supply depots; a naval hospital and other related naval shore station facilities. They involved miles of dock work, a large cold storage plant and development of bulk fuel handling methods and prestressed concrete fuel storage tanks, all designed and built in record time. Many innovations were made in the design and construction of these facilities, several of which cannot be revealed for reasons of military secrecy, but which will undoubtedly be adopted for other uses after the war.



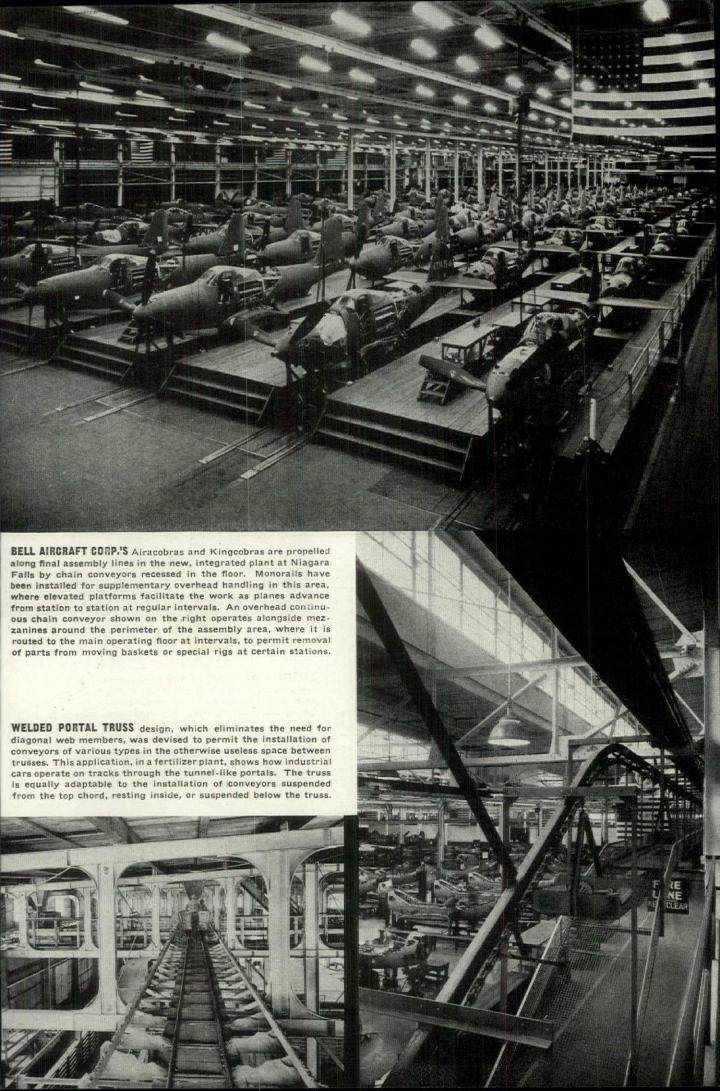
BOEING'S NEW WIND TUNNEL in the Edmund T. Allen Mem Aeronautical Laboratories, shown here in cutaway section, plan photographs, has a 450 ft. tunnel bore of precision poured cond The 24 ft. 16 bladed fan above is driven by an 18,000 hp motor when rotating at top speed of 490 rpm clears its surrounding rin ½ in. Four huge turning vanes with water-cooled louvers at corners eliminate turbulence and remove the heat generate

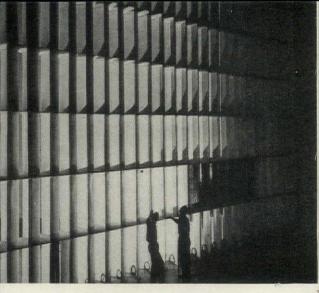


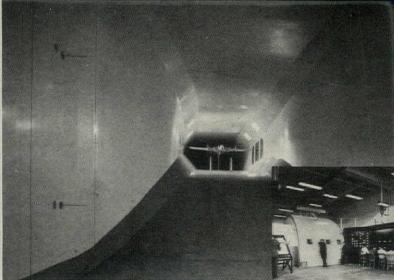
RIGHFIELD OIL CORPORATION'S reinforced concrete research building at Watson, Calif., has a 40 ft. tower at one corner for installation of experimental cracking units. Individual laboratory rooms like that below have double glazed tile partitions and seven service outlets at each bench.



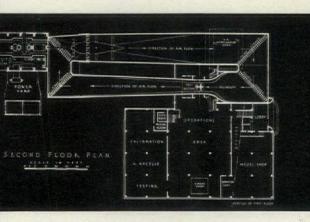


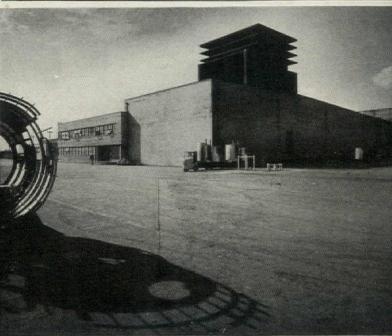






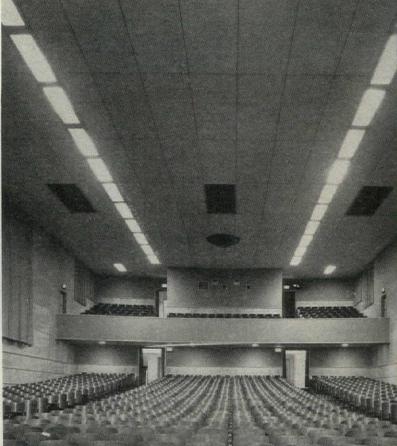
test section above, right. Tolerances of 1/16 in. required e bell-mouth were met by the use of plaster forms, shellaced waxed. Steel cap over test section, and instrument panels shown in inset. Offices and model shops are housed two-story structure adjoining the tunnel, surmounted by the some pagoda-like air-interchanger pictured at the right.

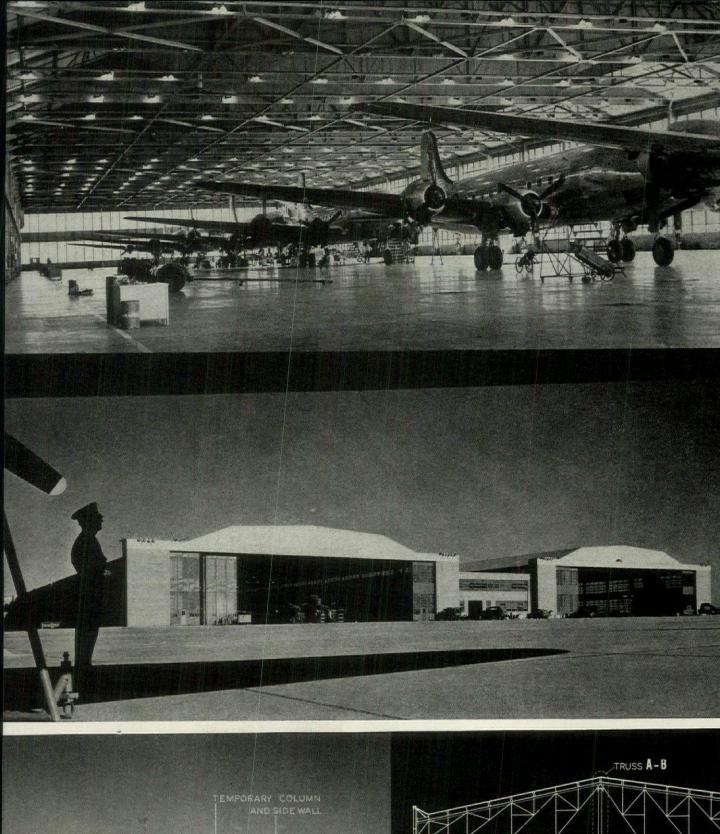


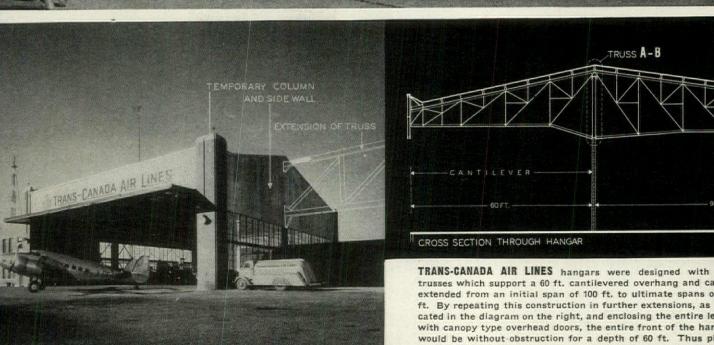


ACHELOR OFFICER QUARTERS and auditorium at the Naval kir Stations on Whidby Island, Wash., illustrate the effective ise of wood and fiber board made by Austin in connection with the development of temporary military installations. The BOQ exterior is plywood and the columns, wood. Acoustical iberboard was used throughout the interior of the theater.









of any wingspread could be accommodated inside provide depth from nose to trailing edge of the wing is under 60 ft

VIATION FACILITIES

ith a background in the design of airports and airport faities that before the war reached from Europe to the Orient d embraced 62 cities in 28 states and provinces of United ates and Canada, The Austin Company was given \$50 milon worth of work in this field during five years of war. This tal is exclusive of hangars and modification centers at Ausa-designed aircraft plants costing several times that amount. Since 1929, when they designed and built the country's first 0 ft. span hangar at the Cleveland Airport, Austin engineers we designed a number of wide-span operational buildings r air-transport use, including 300 ft. span hangars at the ockheed Air Terminal in Burbank, Calif. Base facilities at ajor stops on the Trans-Canada Air Lines illustrate the anner in which they have approached the design of modest ingars which will be readily adaptable for future use by anes of any wing spread.

Facilities included in the Army's Alaskan air base near airbanks indicate possible requirements for future polar air rutes. Special wall and roof insulation and a network of ter-communicating tunnels were required in the face of temeratures ranging from 100°F in the summer to -75° in the inter. Hot air blasts are thrown up across door openings at gh velocity to maintain comfortable working conditions side.

Austin-designed hangars and modification centers erected conjunction with aircraft plants and Naval Air Stations give one indication of the character of facilities which will ultitately be required to round out major American airports. lear spans of 150 to 200 ft. with overhead doors on both des have been provided in the majority of plant hangars, hich have four to six bays and areas up to 200 by 400 ft. atirely without interior columns. Flight control towers have

ODIFICATION GENTER at Oklahoma City concentrates all work four separate 160 ft. bays, arranged in pairs, with 35 ft. clearage below roof trusses. The wide span areas have white cement oors, structural steel framework and gypsum plank insulated toofs. A two-story service section of reinforced concrete extends between the bays in each structure, equipped with ramps to the opper floor, and forming the central, functional core of the design.

been mounted above the superstructures where they command full views of adjacent airfields and approaches.

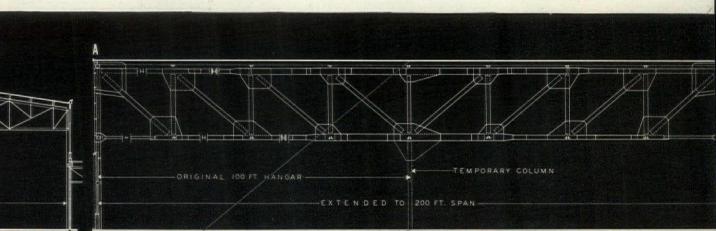
More directly related to the routine aircraft maintenance which will be required when large transport fleets are in service are the modification centers, like that at Oklahoma City shown on these pages.

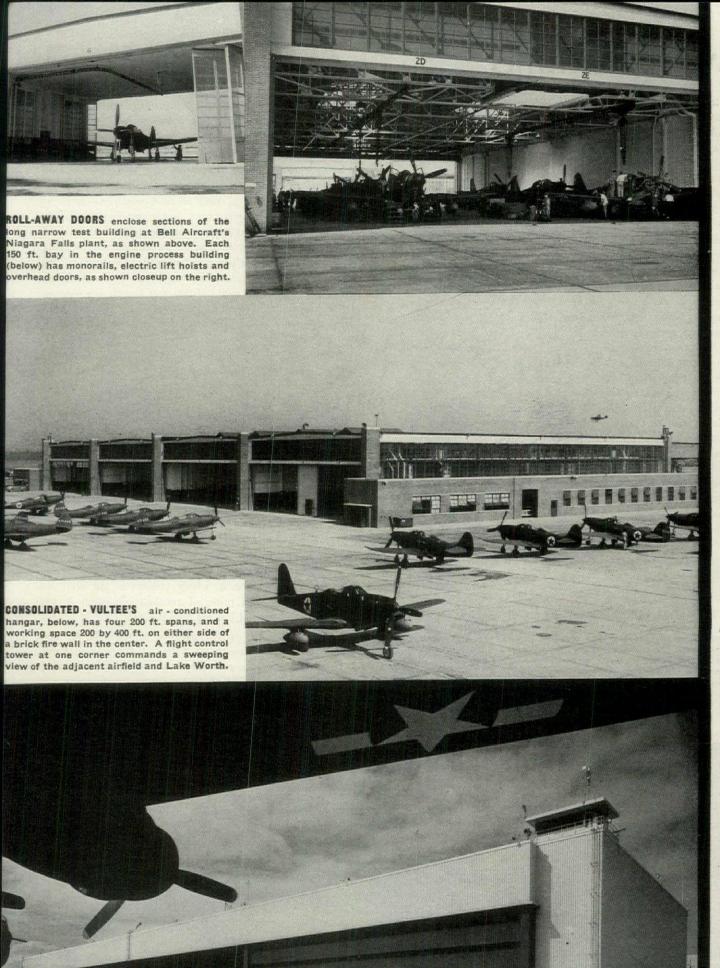
Austin's concept of postwar aviation requirements is reflected in a proposed layout for a mid-continent air terminal, developed after consultation with major airlines officials and authorities. The layout evolved by the company's engineers for this project is described as a "parallel radial system." In the early stages of development, single runways representing only a part of the ultimate 10,000 feet length are contemplated, with limited hangar facilities and a central operations building around which the entire project would develop progressively.

When private flying becomes popular, facilities similar to those designed for the processing and testing of planes by the Bell Aircraft Corporation at Niagara Falls may be required for garaging, servicing and maintenance. Bell's engine processing building has four 150 ft. bays enclosed on both sides by overhead doors, in each of which Kingcobras can be serviced in two lines side by side. This building is equipped with monorail hoists directly above each line and has all the utility lines required for efficient operation. Stock rooms, machine shops and offices are located in low structures extending to the depth of the building at each end.

Austin's design for seaplane ramps, in which precast beams are set on piling and form keyways for the installation of precast concrete deck slabs, was used by the Navy in the interests of economy at seaboard points where wide tidal ranges are encountered. This system, which eliminates the need for cofferdams, may well prove of considerable value in the development of coastal landing facilities.

Austin forsees the early conversion of many of the new military and industrial airports to civilian and transport use. As the civilian program gets under way, they feel that existing facilities will be only the nuclei for future development.

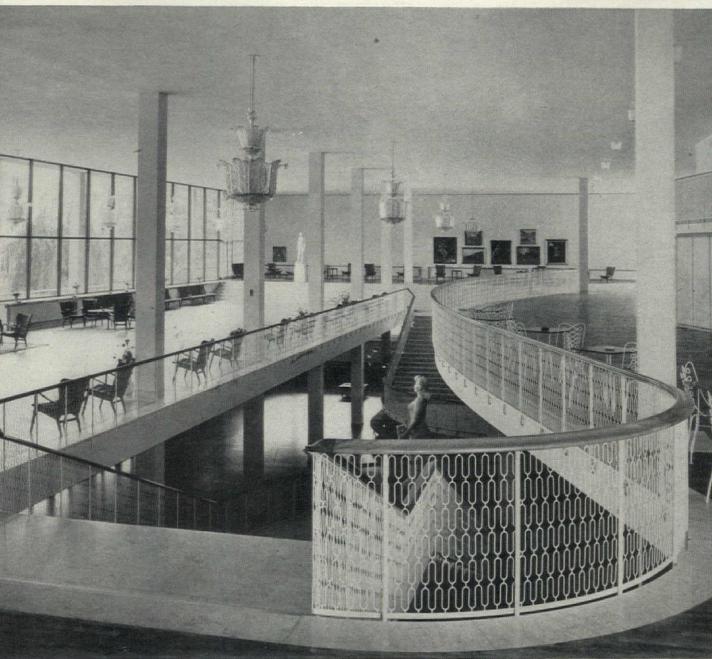






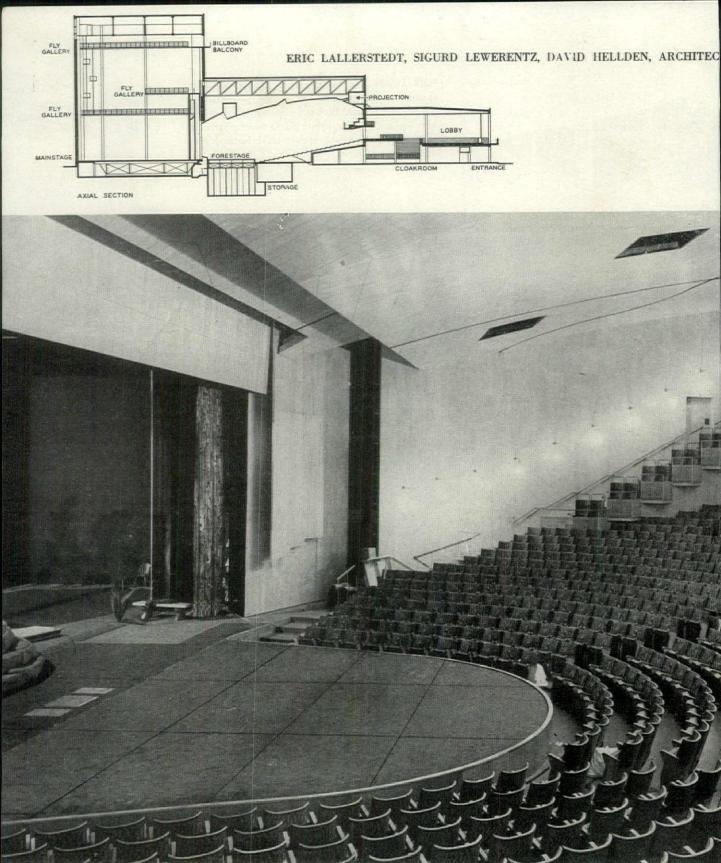
MAIN LOBBY has a light, open appearance partly created by the generous curves and proportions of the grand staircase. Both the ground and upper levels have one entire wall of plate glass. Slender structural columns, an important architectural feature, break the expanse of floor.





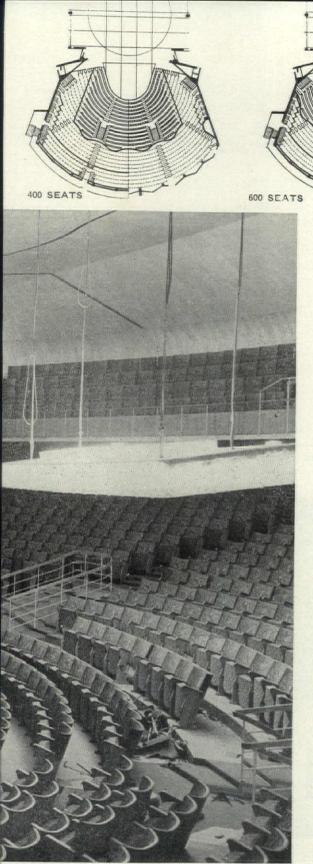
he advent of the motion picture in America dealt an ominous low to the legitimate stage. It froze theaters in the mold of he nineties. While the few erected in recent years have achieved sort of compressed monumentality which ironically passes or spaciousness, progress in theater design has been expressed only in terms of better acoustics, grudging concessions to camped knees, more and deeper inner springs and ankle-high file. The contrast between the threadbare stuffiness of our own layhouses with the familiar entreacte stampede to the bitter cold of the sidewalk, and this new theater in Malmö is as appalling as it is revealing. The Swedish concept incorporates contemporary planning and design principles which, in the U.S., have so far been applied only to living and working. It introduces a new (and much needed) image of the potential pleasure of theater-going. The plan with its spacious lobby and generous use of outdoor space combines freedom and comfort with the latest technical equipment for stage productions of all types.

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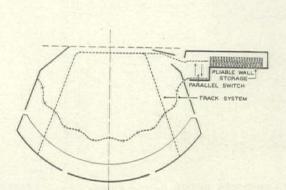
Flexible audience area can be expanded by converting forestage into seating and reduced in size by use of suspended, retractable partitions.

An outstanding feature of the auditorium is an exceptionall large forestage used in conjunction with the main stage by convertible into additional seating or a podium for the orches tra. With the proscenium curtain lowered it can be used by itself for the presentation of concerts or lectures. The strain and discomfort of semi-circular seating arrangements is offset by the fact that the individual chairs swivel to face the main stage. Maximum seating capacity of the auditorium is 1,700 plus standing room for 500 in the lobby at the rear.



C. G. Rosenberg

the acoustical treatment. Two stairways opening into the ter of the seating area connect directly with the ground or lobby. The lighting, which is entirely furnished by exed fixtures, may appear somewhat outmoded when comed to that of modern movie houses in the U.S. However, traditional European concept of the grand spectacle ich parallels the illumination of the spectators with that of production, may be partially responsible.



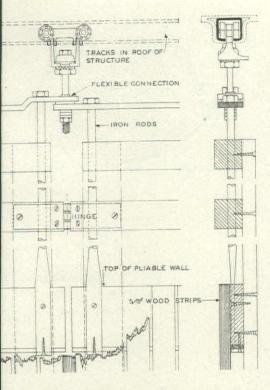
MOVABLE PARTITIONS which emerge from the storage room on ceiling tracks through two openings behind and in front of the proscenium arch, reduce the size of the seating area by more than three quarters, if necessary, without altering acoustical characteristics,

1,200 SEATS

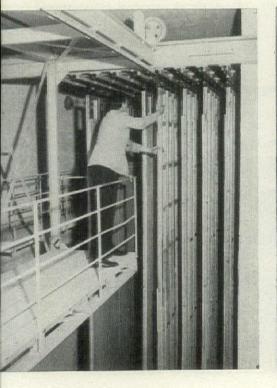


Four alternate schemes for dividing and reducing the auditorium provide flexible capacity corresponding with the size and appeal of the production. This is accomplished with movable partitions which bisect either the depth or the width of the hall. Operating on ceiling tracks, the partitions are cut away at the bottom to fit the slope of the auditorium floor. Circulation was studied for maximum efficiency whether the house is in full or partial use, several combinations of rear and center exits being possible.

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SWITCHING DEVICE for manoeuvering partitions in and out of storeroom consists of a high, movable platform from which the panels are swung onto ceiling tracks.



PROMPTER PIT

POSITION OF CHAIRS WHEN STORED

DETAIL CHAIR STORAGE

AUDITORIUM

POS.4.

STORAGE

POS.1.

POS.4.

POS.4.

STORAGE

POS.1.

POS.4.

STORAGE

POS.1.

POS.4.

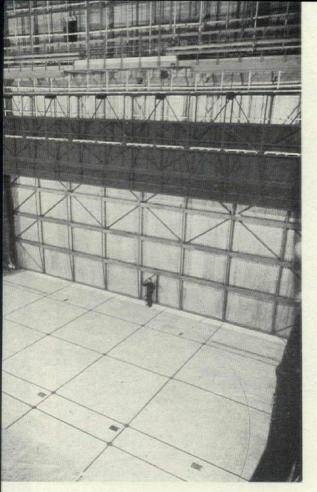
POS.

FORESTAGE WELL is surrounded by a fixed barrier with removable panels which extend the when this section is used for additional seating. When the forestage is elevated to the lever main stage and an orchestra is required, the musicians occupy the space directly under the section of the sect

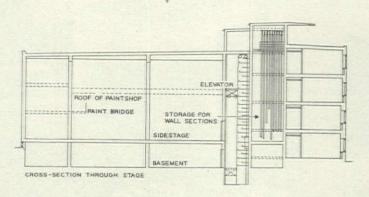
panels. Footlights and prompter's box disappear.

Stage and auditorium are mechanically equipped for a gamut of productions ranging from small meetings to glittering revues. Designed for the presentation of elaborate operas and mucals, plays, concerts and public meetings of all sizes, the Malr theater has mechanical production facilities on a par with the of the most modern American playhouses. It far excels the however, in the comfort and adaptability of the seating ar and public space.

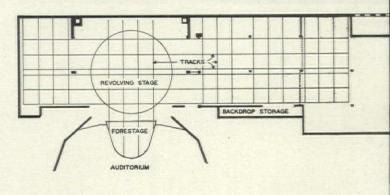
The movable partitions dividing the auditorium consist lightweight panels suspended from ceiling tracks and can moved in and out of place by hand. Those that divide t



ERIC LALLERSTEDT, SIGURD LEWERENTZ DAVID HELLDEN, ARCHITECTS



STEEL PROSCENIUM CURTAIN is 66 ft. wide and weighs eight tons. It can be operated either electrically or by hand. The stage rests on a reinforced concrete foundation which also supports the rear wall of the theater. A heavy carriage traveling on rails is fitted with a steel frame which supports the central, revolving section of the floor.





all in width form straight walls while those that reduce it depth are hung in irregular curves. The panels are contructed from wood slats backed by porous fiber.

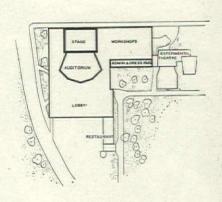
The generous forestage can be furnished from either the rings or a storeroom at basement level and consists of four ections which can be raised and lowered independently or a unison. Fully raised, they constitute a direct extension of the main stage. Lowered to the auditorioum level, they add 00 seats in the stalls. When lowered further, they form a deep

pit into which the orchestra disappears.

The revolving center of the main stage is 66 ft. in diameter and can be regulated to any speed from one revolution per minute down to a snail's pace. The entire floor area of the stage and wings is criss-crossed with embedded rails for shifting scenery. This is done with stage trolleys and any number up to 40 can be operated simultaneously. A motor ramp at the end of the right wing permits a full size truck to be driven onto the stage proper.



Adapted to the surrounding landscape, the exterior of the Malmö theater is executed in gray marble, white stucco and glass.



OWI

DON JUAN





Constructed with the voluntary savings of the residents of Malmö, the city theater is the biggest in Scandinavia. It-imposing appearance and workmanlike plan are no less notable than its generous gardens and outdoor terrace. While the lobby and public rooms are spacious in themselves, an extensive use of plate glass opens them to the surroundings, giving the building more the appearance of a pavilion than of a theater as it is usually thought of in this country.

The facade of the wing housing dressing rooms and ad-

ministrative offices is simply treated with regularly placed, standard fenestration. At the extreme right of the main building are located a small theater for special performances and a rehearsal room for the orchestra.

The restaurant, which is equipped for indoor and outdoor dining, can be reached from both the theater and the street. It is directly connected with the ticket office for the convenience of those who wish to dine before the performance. Outdoor dining space is provided in the large court and on the roof.

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The second floor of the lobby is furnished with the informality characteristic of Swedish interiors. Large expanses of off-white plaster walls are relieved only by the windows and a few touches of color in the upholstery. However, the small paintings which appear so out of scale, will be replaced by murals in the future—an important contribution to the warmth of the decorative scheme. Contrary to expectation, the lighting fixtures are not Venetian, but Orrefors glass.

POSTWAR BUILDING TECHNI

A thorough analysis of the postwar building picture has long been a need of architects and builders who are groping for a stable basis on which to plan for future work. This series of articles is designed—in so far as is possible at the present time—to fill this need. The first article, which appeared in January, was devoted to construction techniques and their more significant applications. This month's article deals with new materials and their anticipated uses. The third, which will appear in March, will be devoted to new equipment and its place in postwar construction.

One of the outstanding characteristics of postwar building will be a wider choice of materials than was ever before possible. The many new products which have been developed during the war as a matter of necessity have proved in many cases to be far better than the scarce materials they replaced. In addition, our increased production of metals and other substances vital to the war will inevitably mean enlarged supplies at reduced prices when they are released for civilian use. Plastics have come into their own, and already a mountain of conjecture has arisen as to their place in the postwar world. Probably more important than uses made of plastics per se will be their application to existing materials to form completely new structural products. Of particular interest are the new impregnated woods which will undoubtedly have a tremendous influence on future construction. Advances in metals and masonry are equally important, however. These new developments deserve consideration since building is inevitably dependent on the properties of its constituents and design must keep pace with modern materials to be truly functional. This article, therefore, is devoted to significant improvements in all types of building materials and attempts to evaluate their possibilities for future use.

WOOD

The research which has been under way for some years in connection with wood has resulted in a basically new approach to this common material. Formerly looked upon chiefly as a source of lumber and fuel, it is now regarded as a chemical substance which can be analyzed, rearranged, and recombined to form completely new structural materials. Impregnation with synthetic resins under heat and pressure is the basic method used in forming these new treated woods which are generally known as "impregs."

Structural treatments of this type result in widely divergent products depending on the impregnating substance used and the amount of heat and pressure applied. One of the most interesting is "compreg" in which thin layers of resin impregnated wood are greatly compressed under heat before the resins have set. The resulting hard, dense, beautifully grained substance is resistant to alcohol and burning cigarettes and has a high natural surface gloss which results from the impregnating chemical without polishing. In addition, compreg has a tensile and shear strength equal to the original wood, but because it is compressed into thinner sections, can maintain greater unit stresses. Unlike ordinary



woods which require scarfing or planing, it can be completely shaped by molding. During the war this new substance has been used extensively in airplane propellers, where its density is decreased as the blade tapers, thus concentrating strength where needed and eliminating extra weight at the tips. This suggests postwar uses for compreg as a construction material where great strength is necessary in a limited space. It would make an excellent flooring material, tiling or decorative surface and should be ideal for burn-and moisture-resistant furniture. Used as a thin surface layer bonded to an uncompressed material its wearing qualities would be exploited in a relatively inexpensive form.

Another completely different material which has been produced by special treatment is plasticized wood, sometimes called urea wood. To produce this new substance ordinary wood is impregnated with a urea compound under an initial heat treatment which renders it extremely pliable. It can be bent, twisted, even tied in a knot and upon cooling retains the shape it was given when heated. There are two types of urea wood: thermoplastic which becomes pliable again when reheated, and thermosetting which remains stable after the first

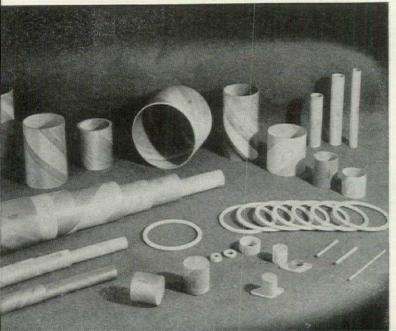
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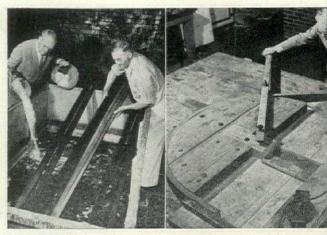
treatment. Because of its unique shaping qualities, this material may find postwar uses in furniture, curved stair railings and other jobs which formerly called for skilled cabinet work.

The process of transmuting wood into harder wood (E. I. du Pont de Nemours and Co.) has received a tremendous amount of publicity since its introduction a few months ago. In this process dimethylolurea and urea in a water solution are impregnated into the wood structure using vacuum and pressure and react to form hard, water-insoluble resins within the lumber. Natural acids in the wood start the chemical reaction which is speeded by the application of heat. With this process, according to the manufacturer, "poplar becomes harder than hard maple, which in turn can be made harder than ebony." It promises many new uses for pine and other soft woods, which are at present the most abundant form of timber. Color can also be impregnated into the wood by mixing a dye with the chemical solution, and in this way light woods can be made to resemble cherry, rosewood or mahogany, or dyed any other desired color. In addition to its increased hardness and compressive strength, transmuted wood becomes moisture resistant and it is claimed that doors, windows, and drawers made of wood so treated have less tendency to swell and stick or contract and become loose.

Another relatively stable wood has been produced by a process of compression combined with heat but without impregnation. This is sometimes referred to as compressed wood, sometimes as stabilized wood (developed by the U. S. Forest Products Laboratory). It has been known for some time that wood is exceedingly compressible in across-thegrain direction but the main limitation to this method in the past has been lack of dimensional stability under adverse moisture conditions. Recent developments, however, have shown that pressure applied under certain optimum conditions of temperature and moisture content results in compressed wood which is relatively moisture stable. This new process also retains the high shock properties of the wood and provides a glossy finish similar to compreg. As a war invention it is being used in the aircraft industry, and will be available after the war for window framing, cupboards and other construction in which stability of wood is an important factor.

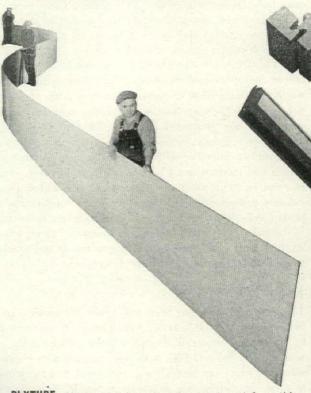
Treating wood so that it becomes fire proof is another process which has shown great development during the war. This quality can be imparted to wood by impregnating it with substantial quantities of suitable chemical, notably the phosphates of ammonia, or mixtures of ammonium phosphate, ammonium sulfate, borax and boric acid. Formerly, the use of





UREA WOOD is made by placing lengths of ordinary wood in urea which impregnate resins into the wood structure. After this ment the wood is heated and becomes so pliable that it can be be almost any shape. The bending process is completed on wooden

TRANSMUTED WOOD, hardened and made moisture-stable by the methylolurea process, is used for sash parts (below right). Long sheets of plywood are fabricated by scarf-jointing. (below left)



PLYTUBE (left), a laminated tubing fabricated from thin wood veneers impregnated with a waterproof plastic resin, is stronger weight for weight than steel tubing. The construction consists of spiral winding in opposite directions in combination with longitudinal plies, and may be varied to meet specific stresses and strains of different applications. The material is made resistant to rot, corrosion, fungi, splintering, termites and flame by special treatment.

U. S. Plywood Corp.

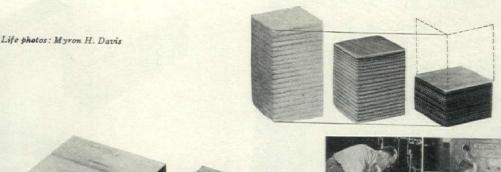


TEKWOOD (above), a paperfaced plywood, may be embossed. Plastic - faced plywood (right) provides hard, paintable surface.

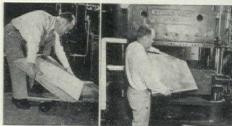




upon cooling, the urea wood is its newly acquired shape. are two types of urea wood: noplastic and thermosetting.



STAYPAK, a wood compressed across the grain under moisture content and temperature conditions that prevent springback, is more stable than ordinary compressed woods. Density can be doubled, strength increased.



COMPREG is made by impregnating wood veneers with resins and subjecting them to great pressure and heat. Samples show results of various pressures.

reproof wood was limited almost entirely to places where it as required by the building code. Now, it has come into such wider use since large quantities of it are necessary in the construction of hangars and other war buildings. In the lature, it should be much more commonplace.

Surface finishing, an entirely different approach to the treatent of wood involving no structural change, has also been eveloped to a high degree during the war, and promises to be f great importance in postwar construction. This new deelopment involves the facing of plywood with other marials of contrasting qualities, thus obtaining the advantages f both. Plastic-faced plywood (Inderon or Super-Harborite) one of the most important of these new materials because f its cheapness and the fact that it will be manufactured on large scale after the war. It is produced by surfacing plyood panels with a plastic laminate under normal pressure and eat. Paper is used as a carrier for the resins forming an paque coating and in the future may also be made transarent, revealing the wood grain. The new product is resistant moisture, splintering, abrasion, corrosive and toxic fumes nd will not delaminate even under extreme exposure. Its nooth surface takes paint extremely well. Now being used for ilitary applications, it will be a popular postwar material for oth interior and exterior construction and for paneling. Besuse of its great strength and dimensional stability coupled ith the fact that it is inexpensive and easy to work, it should e used extensively in prefabrication, furniture manufacturg, railroad cars, bus and truck bodies.

Metal-bonded plywood is another important finishing techque which provides a light, strong, rigid, fire- and dent-resisnt material, much cheaper than solid metal but with many its advantages. Steel and aluminum are most commonly sed, bonded to a plywood plaque in such a way that automatic ljustment occurs between the wood and metal. This comnation is particularly good as a covering for sub-structural amework and as a fabricating material for sinks, work surces, laboratory and kitchen surfaces.

Paper-faced plywood, made by U. S. Plywood Corp., is nother new surface finished material which has been thoroughly tested during the war. Hardwood veneer cores are ced with cylinder craft paper to produce an extremely cheap, at flexible and durable product, widely used at present in intainers for war materials. The paper surface can be em-

bossed to simulate fabric, leather and other surfaces at a very low price, an advantage for wall coverings in low cost homes. A variation of this product in which the facing sheets are impregnated with resins to provide a strong, water resistant surface is now in the final stages of development. In pastel colors, it would offer many uses for walls and ceilings in bathroom or kitchen, or as a topping material for tables.

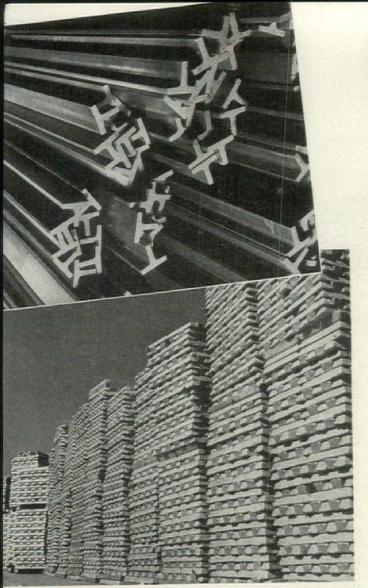
Molding plywood into new shapes is a development perfected by the aircraft industry in connection with building fuselage parts. In the future it will be applied to furniture and to prefabrication of such structures as staircases, molded in a single unit. With advances in molding techniques, tubular plywood shapes have also been produced for the first time. Fabricated from thin wood veneers and impregnated with a water-proof plastic resin, the tubing is stronger weight for weight than steel tubing and has replaced metal and solid lumber in many war uses. It is rust and rot resistant, impervious to wind, rain and extremes of heat and cold.

MASONRY

Perhaps the most important development in masonry is not a new material-it is the simplification of sizes with the choice of the 4 in. module as a basic unit for postwar manufacture. Modular brick has been available on order since 1941, but only recently have the clay products industry and the concrete block manufacturers promised postwar modular masonry including brick, structural tile, glazed and unglazed facing tile, cinder blocks, and concrete blocks on a countrywide basis and as a stock product. This bids fair to solve a problem which is as old as the building industry-the fitting together of diverse materials from many sources without cutting and fitting at the site. Because masonry is one of the fundamental materials for most buildings, this is an important step in eventual development of modular dimensions in all building products. The new masonry fits most stock sizes of wood windows and doors, and already manufacturers of other millwork and building equipment are considering modular sizing for their improved postwar products.

Structural improvements in masonry will also be important to the forward-looking builder. The difficulty encountered with ordinary concrete pavements which scale under freezing and thawing cycles because of the use of calcium chloride for ice

FEBRUARY 1945



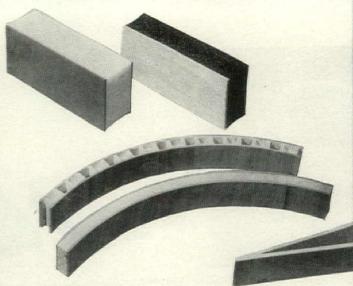
ALUMINUM ALLOY in extruded form (top) has a vastly increased postwar potential. Row after row of magnesium ingots weighing 5 lbs. each (above) are stacked for shipment at the Basic Magnesium Plant in Las Vegas, Tex.

removal has now been corrected. A system of air-entrainment produced by the introduction of an air-incorporating agent into cement, has been found to eliminate this condition. This improved cement is no more expensive than the ordinary kind.

The use of reinforced brick which was developed before the war received considerable impetus from WPB's urging its use to conserve steel lintels. In postwar construction it will probably be used more extensively than before.

Although not new, hollowcast, concrete slab construction, has now been thoroughly tested in war applications and can be used with confidence. One of the best types called Flexicore consists of concrete slabs reinforced with pre-stressed longitudinal steel bars and containing hollow cores. Their use speeds erection, eliminates formwork and produces a lightweight floor or roof of great strength and rigidity. In addition, the cored construction provides sound and thermal insulation.

Conductive asphalt tile, a flooring material which has been developed by Armstrong Cork Co. to end explosion hazards in arsenals, powder plants, etc. will find postwar use in hospital operating rooms, or industrial areas where fumes and dust constitute a hazard because of static electricity. Made of non-sparking material with an extremely low critical resistance, it is less expensive than floorings which include copper, copper wire or rubber. Greaseproof conductive tile has also been developed and should be useful where grease spillage is a problem in addition to the hazard of static electricity.



SANDWICH MATERIALS include cellulose acetate faced with Pa preg (top left), carbonized rubber with plywood (top right) intricate grid core and a balsa core faced with plywood (center and an airplane tab section of balsa and Papreg (lower right)

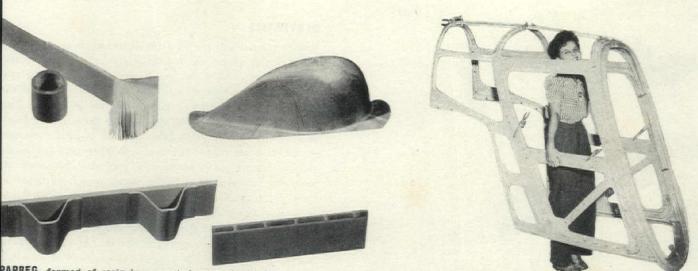
To improve illumination and combat light absorption in industry, the use of white cement floors instead of the usua gray has been recommended by the Universal Atlas Co. The white floors act as reflectors, reducing contrast between work and background and increasing the light on the work. Use of this flooring has reduced accidents, increased production and helped to preserve the health of workers.

METALS

One of the important developments in the metal industr is the standardization of steel window designs and dimer sions in coordination with modular masonry. Installation details in uniform standard sizes for both residence casement and non-residential windows in a great variety of kinds are makes will be manufactured after the war. They will be interchangeable in the window opening, thus permitting the architect to lay out openings and determine later the kind of window to be used. Production economies will be possible and the cost of accessory materials such as screens, shades and glass should also be lowered as a result of this over-all standardization. Sizes are based on a 20 in. width and on a 16 in. height with one exception which is based on a 24 in width.

Increased production with possible lowered prices is the other highly significant development in the metal field. Regular steel may not be cheaper, but price reduction is anticipate for the special steels. Increased production of structural panel or units made from light gauge steels will undoubtedly effect economies resulting in wider use of such postwar materials. Stainless steel, particularly as its price goes down, is likely to be used more extensively for exterior doors, escalators, fire places and other applications where expense would form erly have ruled it out. Its excellent construction qualities—hardness and rigidity—makes it suitable for such use, and it smooth lustrous appearance makes it highly compatible with modern design.

Aluminum is another familiar material which has in the past been too expensive for use as an average building material. With production increased many times, its postwar price will be low enough to permit its application in allow form as a framing material. It will never be able to replace steel as a heavy skeletal material, but light weight wall panels of aluminum will undoubtedly be developed. It may also be applied successfully to prefabricated bath and kitchen units



PAPREG, formed of resin-impregnated paper (top left), is used to form molded pulley fairings for airplanes (right), stiffener plates with "hat" sections glued to a flat piece (lower left), and high strength stiffener sections (lower right).

Because it does not rust, and therefore needs no protective coating, aluminum is particularly suitable for windows, and was used for this purpose before the war in spite of relatively high prices. These more efficient windows which do not stick for produce metallic salts to stain adjacent paint and woodwork, will in the future be available within the price range of the average home. Aluminum may also replace galvanized ron and copper in flashing, and metallic trim.

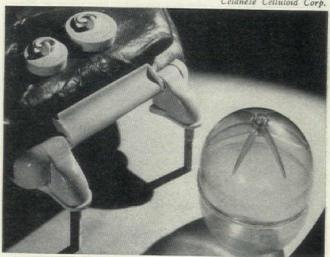
Magnesium, like aluminum, was used to a certain extent before the war, but its cost also prevented any widespread application. With large quantities available, it is now regarded as the inevitable postwar material for movable objects because of its extremely light weight—one-fourth that of iron. Stepladders and various pieces of furniture made of hollow magnesium will be so light that they can be picked up with one and. Both magnesium and aluminum have excellent machine-bility and can therefore be efficiently fabricated into finished parts. Standard and special shapes such as bars, rods and abing can be produced in a wide variety of forms and sizes by extrusion. This is particularly important because it frees the designer from the limitations of standard shapes.

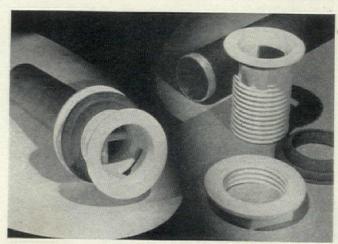
Beryllium combines many of the best qualities of the other netals, being as light as magnesium, as hard as steel, and restant to corrosion and fire. However, its great brittleness takes it impractical as a building material and its extremely ligh cost is prohibitive. Combined with other substances its dvantages can be exploited to the full. Use of beryllium as a ardening component in alloys is therefore likely to prove a steadily increasing usefulness in the postwar world.

New finishes have been developed for many of the metals iscussed which give them added importance to postwar contruction. Steel is now being coated with aluminum to prode the non-corrosive heat resistant surface necessary for rewalls and air intake filters in aircraft. This combination aterial will be extremely useful in postwar construction here great strength and rigidity plus rust resistance is ecessary. The electroplating of chrome, brass, bronze or her metals to aluminum has also made great strides during the past year and will be available in the future as trim or in anels. Similar uses are predicted for colored aluminum, and before the war, but improved under wartime experimention. Better colors and more lightfast dyes have been developed, but this aluminum is still limited almost entirely to terior applications.

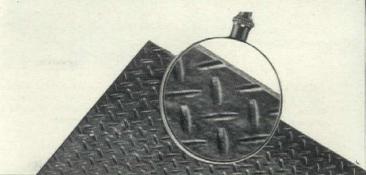
LAMINATED MOLDED FIBERGLAS, a result of new low-pressure lamination with improved glues, is used to make complete cabin structure of war helicopters (above). Lumarith plastic is made into sink stoppers, cover hinges and toilet tank floats (below).

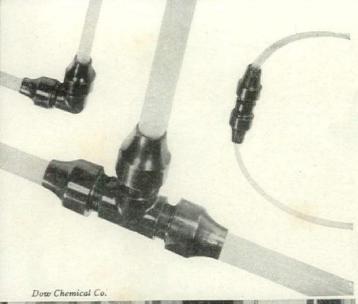
Celanese Celluloid Corp.





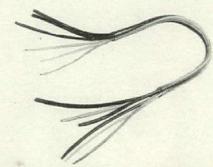
LUMARITH SINK DRAINS (above) are made in three parts: a surface lip having a threaded section, a rubber washer and a Lumarith washer to hold it in place. Plastic Ameri-tred non-slip friction-type matting (below), used as supplementary floor covering.

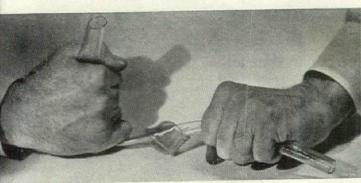






SARAN TUBING, an extruded plastic for hot and cold water plumbing, is extremely flexible, resists temperatures up to 170° F. and may be flared or bent. Top photograph illustrates tee, elbow and coupling connections, lower one shows installation. Fittings can be either plastic or metal.





TRANSFLEX, a plastic tubing which provides insulation for electrical wiring, also facilitates identification by use of a range of colors. It is non-oxidizing, resistant to acids, alkalies, oils and greases and does not promote electro-chemical corrosion.

SYNTHETICS

Rubber substitutes have been the subject of controversy since the beginning of the war and the interruption of our natural rubber supply. After the war it seems likely that the synthetics will remain, for in many cases they are superior to the natural product. Neoprene which was made by E. I. du Pon de Nemours and Co. before the war has been further developed and will be applied in different forms to many household products. Foam rubber cushions, upholstery and mattresses will last much longer when made of Neoprene, because of its heat and sun-resistant qualities which permit exposure of these products to sunlight and sterilization. It is also flame resistant. Marble chips stirred into a colored Neoprene later will provide a terrazo flooring mixture easily poured over a base flooring, troweled down and sanded. Another synthetic product has been developed into a rubber-like matting which serves as a supplementary floor covering to prevent slipping Many non-slip plastic coatings for floors have also been de veloped which can be applied by trowel or spray gun and se up so rapidly that traffic can be allowed on the surface within a few hours.

Fireproof fabrics, devised to meet present needs will be used to a great extent after the war in places of public assembly Fiberglas drapery fabrics, woven in many different textures colors and designs are completely fireproof, since glass doe not burn, but melts under extreme heat. In addition these materials shed dust readily, are mildew proof and imperviou to moths or other insects which attack natural fibers. A fireproof plastic upholstery made by U. S. Rubber Co. is now being used on furniture for all new naval combat vessels. It consists of a fireproof compound used as a coating on a fireproof base fabric, and combines for the first time qualities of waterproofing with fire resistance.

Lamination of all types of materials has made greatives during the war almost entirely because of the new glue developments. Organic cement and synthetic resins now make possible the bonding of wood, rubber, plastics, cloth or leather to any desired metal or to each other. A liquid cementing process has proven stronger than riveting or spot welded assembly, and materials have given way before the bond breaks. Both the cements and some synthetic resignues are unaffected by moisture, making possible outdoor use of glued construction. A new casein glue contains a preservative against molds and fungi, which insures its strengt indefinitely under extremes of temperature and humidity

Papreg, a new structural material made of layers of pape impregnated with resins is one of the outgrowths of these ne glues. It has a high tensile strength, resistance to moisture scratching and denting and may be molded like plywood. I has been utilized in spiral-wound tubular forms for concret piers. The molding of all laminates-either cloth, paper of light veneers-is a direct result of glue improvements. Low pressure lamination, a new process which permits the manu facture of large-area, compound-curve forms, is possible be cause glues have been developed which will laminate withou the high pressures formerly necessary. One of the most inter esting of these is the Fiberglas laminate which is stronge weight for weight than metals. It can be shaped, drilled punched, sawed, ground, turned, threaded or planed. Con plete kitchen and bathroom units could be molded of th laminate which has the added advantage of being fireproo It also offers possibilities for refrigeration and plumbin units, and for mar-resistant, waterproof furniture.

(Continued on page 146)



If Formica laminated plastic was a living organism it would just about have to be sired by the turtle, which sometimes lives for centuries, and the butterfly, which exhibits a richness of color unsurpassed by any living

Tough? It is harder than many metals but it won't tarnish or corrode. It is harder than ebony and it won't crack or chip. Its smooth surface does not stain. It is not dulled by ordinary wear.

Colorful? It comes in colors and shades to harmonize

with any decorative scheme and lends itself to inlays and patterns. It also comes in popular wood finishes formed by impregnating actual veneers with plastics covered with an added layer of transparent plastic. There is cigarette-burn proof grade available for table and fixture tops.

THE FORMICA INSULATION COMPANY

4620 SPRING GROVE AVENUE CINCINNATI 32, OHIO

The impeccable prewar performance of Formica as panelling, wainscot, column covering, kick plates, and furniture and fixture tops in public buildings, hotels, smart shops, swank restaurants, cocktail bars, luxury ships and trains, forecasts a tidal postwar swing to laminated plastic.



For Tomorrow

BILT-WELL WOODWORK OF PONDEROSA PINE

and Tomorrow

Just as the past 78 years have expressed Bilt-Well's unshaken confidence in America's preference for fine woodwork, so our plans for the "house of tomorrow" embody the finest artistry of the designer and the most painstaking technique of the craftsman in wood.

and Tomorrow

Throughout the years, we have maintained the same firm and uncompromising attitude toward quality materials and workmanship. Likewise, we shall continue in our belief that a world of experience, plus a willingness to keep pace will be the prime factors in the "home of tomorrow."

CARR, ADAMS & COLLIER CO.

DUBUQUE, IOWA

BILT WELL

POSTWAR BUILDING TECHNIQUES

(Continued from page 144)

Plastic packaging materials have been developed under war necessity which provide effective protection from water, weather, mold and other perils which damage equipment during transit. A molten plastic called Stripcoat is used to coat metal parts forming a tough, waterproof and corrosion-resistant skin, easily removed by slitting and stripping upon delivery. Pliofilm or metal foil may be used to surround delicate mechanisms in combination with a dessicant to eliminate moisture in the contained air. Laminated woods and fibers impregnated with protective resins and waterproof paper are also efficient for packaging materials which require a moisture barrier.

PAINTS AND COATINGS

With the coming of the war, the paint and varnish industry was called on to supply a wide variety of finishes and protective coatings for every type of wartime construction. Because of this accelerated pace, great strides have been made in water resistance, quick drying, color permanence and durability. Improved hiding qualities now make possible a two-coat house-painting system. Resin emulsion paints which can be thinned by water have gained enormous public acceptance and will compete with oil paints in the future. They will be available in gloss and semi-gloss finishes as well as the usual flat finish.

Protective coatings with their new and improved properties will also have added importance in postwar construction. Both a primer for house paint and an exterior paint for masonry have been developed which prevent mildew and fungus growth. Fire-resistant paints, experimented with for many years, are now really effective. One type forms a coating which prevents flames from reaching combustible material beneath. Another, used on fabric, penetrates the cloth and when exposed to flames, smothers the fire. Infra-red reflecting paints developed during the war will be useful in both industry and the home to lessen heat absorption. As an exterior finish the infra-red paint helps keep the building cool by reflecting the sun's rays. Zinc chromate, not a new formula, has shown phenomenal growth during the war as a rust-inhibiting coating for metal. Fire-retardant paints for metal are now in the experimental stages and will eventually be available. Floor and woodwork finishes have also been developed which have qualities superior to former waxes and varnishes. A new liquid floor polish, gives a lustre equal to that obtained from floor wax and in addition creates a film on the floor which materially reduces the slip hazard.



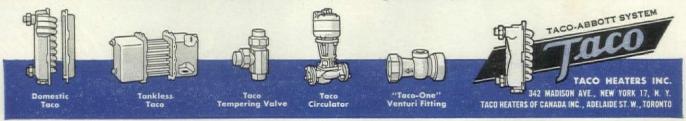
A silicone waterproof film made by General Electric Co. will be available which makes paper, fabric and ceramics water-repellant. It is applied in the form of a chemical vapor treatment. Koroseal, a waterproof elastic plastic, will be available in various forms—films, sheets or extruded shapes. Used as a coating it may be applied to all fabrics

(Continued on page 150)



After you specify or install a Taco Water Heater or a "Taco-One" Venturi Heating System, you don't have to cross your fingers for luck! You can count definitely on satisfac-

tion for the home owner—legitimate profit for the contractor. You can depend on Taco engineering, knowledge, experience and responsibility.



4IMPORTANT REASONS

why architects are recommending



ervel all-Year Gas Air Conditioning

for their post-war homes!

It provides a "new quality of living." Through every season, homes with Servel All-Year Gas Air Conditioning provide a comfortable climate indoors. Even during the hottest summer months, the air is cool and fresh. Sticky humidity is completely

banished. And in winter, the same simple Servel unit keeps homes delightfully warm with clean, humidified air. There are no drafts, no dirt. This is the type of all-year air conditioning that 72% of the people who plan to build or buy after the war have said they want.

It is a proved success. More than 400 Servel All-Year Gas Air Conditioners are in operation today in homes and commercial buildings from coast to coast. Everywhere users are enthusiastic about the "new quality of living" they're enjoying.

Financing agents endorse it.

gents Says one, "A home with this type of equipment can be appraised at a higher figure." Another writes, "We think so well of it that we are prepared to extend longer than usual terms on buildings so equipped." Still another says, "It will greatly retard the obsolescence rate of the home structure." Such statements are typical of the high regard that financing agents

structure." Such statements are typical of the high regard that financing agents have for the Servel All-Year Gas Air Conditioner.

Gas Companies support it.

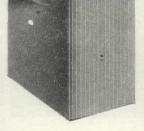
ies Leading gas utility organizations all over the country are already actively promoting the Servel All-Year Gas Air Conditioner to their customers. Air conditioning engineers from your local Gas Company will be glad to assist you in planning Servel All-Year Gas Air Conditioning for your postwar homes.

Taken together, these four big facts explain why so many prominent architects are recommending, and planning to install, Servel All-Year Gas Air Conditioning in their post-war homes. They explain, too, why clients are so enthusiastic about homes with this modern

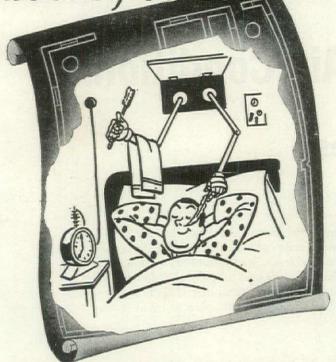
new equipment. But even the facts above do not tell the whole story about this revolutionary new development in all-year air conditioning. Get complete details today from your local Gas Company, or write direct to Servel, Inc., 2502 Morton Avenue, Evansville 20, Ind.



SUMMER COOLING-WINTER HEATING-IN ONE SIMPLE UNIT MADE BY THE MAKER OF THE SERVEL GAS REFRIGERATOR



BLUEPRINTS FOR YOUR HOUSE of TOMORROW



YOU MAY HAVE AN AUTOMATIC BEDROOM

This automatic bed, of the world of tomorrow,

Your Heating Plant will be KOVEN WATERFILM



DE LUXE MODEL For Better Grade Homes

choice for economical heating satisfaction. KOVEN WATERFILM, the fastest steaming boiler on the market, incorporates all the newest scientific developments to bring you quick heat, even room temperature and a plentiful supply of domestic hot water. Its patented construction and smart modern jacket cannot be duplicated by any other boiler on the market. KOVEN WATER-FILM can be used for automatic firing with oil, stoker or gas ... for use in apartment houses, large or small homes and industrial plants. The sectional series for apartment houses or industrial plants can be taken through a 2 foot door thus eliminating rigging and alteration costs. Call or write KOVEN for complete information.

154 OGDEN AVENUE

PLANTS: JERSEY CITY, N. J. . DOVER, N. J.

POSTWAR BUILDING TECHNIQUES

(Continued from page 146)

except acetates, on wallpapers, and furniture and makes possible simple cleaning merely by wiping with a damp cloth. Waterproofing has even extended to the soil, in the form of a specially treated resin and chemical mixture (Stainol), which makes soil water-resistant by preventing the penetration of surface water or the capillary rise of moisture from below. Roads treated with this product never become muddy even during a rainstorm.

Luminescents are another relatively new development extensive use of which during the war has resulted in many new applications. There are two types: fluorescent which must be activated by either visible or black light, and phosphorescent which glows in the dark after being subjected to ordinary



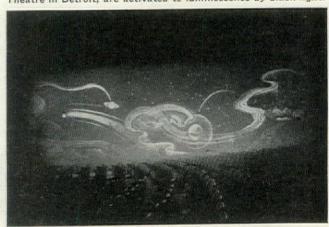
light. Made into paints they can be used on displays, signboards, murals or stair railings: incorporated into plastics they are used for switch plates and doorknobs. As an emergency light source, phosphorescents will permit movement in a room or a factory in case of a power failure. Properly executed in a theatre auditorium, fluorescent designs actually add to the comfort of the occupants by relieving eye strain caused by the strong contrast of the motion picture

light beam with the surrounding darkness.

The new glues also make possible the fabrication of sandwich materials which consist of an insulating core faced on either side with a finish material. The interior of the sandwich may range from synthetic sponge rubber to compressed sawdust and paper pulp while the exterior choice includes metal, papreg, plywood, balsa, etc. Sandwiches may be used in flat sheets or bent into curved sections and have already been used effectively in prefabricated housing. Eliminating the necessity for extra insulation, they provide strong structural panels complete in themselves.

Thermopane, a more revolutionary type of sandwich, is an insulating window glass whose core is dehydrated air sur-(Continued on page 154)

FLUORESCENT MURALS used as interior decoration at the Mercury Theatre in Detroit, are activated to luminescence by black light.

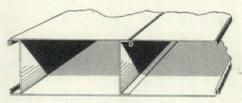




These new panels will enable you to construct your buildings with speed and economy as soon as restrictions are lifted. They're designed for great strength, yet are light in weight. They lock together—fast—with great savings in field labor.

The interlocking panels provide attractive flat or ribbed surfaces, ready for the application of any finishes you desire. They are vapor-sealed, non-combustible, can be insulated. Fenestra Building Panels can be used to form an entire enclosure of steel—or as floors, walls or roofs along with other structural materials.

THREE TYPES

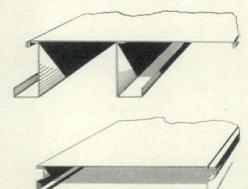


TYPE B has one flat surface and two channel-type ribs. Can be used with flat side-up or down, inside or outside. 16" width, depth 3" to 9", elements of sections in combinations of 18 to 10 gauge. As with Type A, this versatile panel permits easy application of wood, concrete or other surfacing materials.

TYPE A consists of two channels with top and bottom plate which, with service cover, form a two cell box beam shape

when interlocked with adjacent section Service cover gives access to cell for installing service facilities, 16" width, 3" to

9" depth, elements of sections in combinations of 18 to 10 gauge.



TYPE C—used horizontally or vertically for walls. Normally filled with insulation at the factory. Corrosion-resistant metal can be used for outside sheet. Walls can be covered, inside or outside. 2" and 3" depth, 16" width. Gauges vary according to application requirements.

GET THE FACTS... SEND FOR CATALOG

Fenestra UILDING PANELS FOR

DETROIT STEEL PRODUCTS COMPANY, Building Panels Division (formerly Holorib Div.) Dept. AF-2, 2252 E. Grand Boulevard, Detroit 11, Michigan

Please send me, without obligation, information on Fenestra Building Panels.

Name				
Company				

New York

GENERAL MOTORS DESIGN COMPETITION

- 5 First Prizes of \$5,000 each
- 5 Second Prizes of \$2,500 each
- 5 Third Prizes of \$1,000 each
- 5 Fourth Prizes of \$500 each
- 20 Honorable Mentions and
- 20 Special Awards of \$250 each

General Motors Design Competition for Dealer Establishments is now in progress. It is being conducted by The Architectural Forum.

Programs are now being mailed to competitors.

The competition involves the design of buildings and grounds for automobile dealer establishments, including showrooms, offices, service facilities, parking areas, and parts, accessories and used car displays.

It presents opportunities to win the above amounts in one or more of five categories: designing establishments for average-size dealerships

COMPETITION APPROVED BY AMERICAN INSTITUTE OF ARCHITECTS

AND

ROYAL ARCHITECTURAL INSTITUTE OF CANADA

handling passenger cars and commercial vehicles; similar dealerships of medium size; large dealerships devoted to passenger cars exclusively; dealerships engaged exclusively in the commercial vehicle business; and a series of special awards for structural and decorative design derails.

The Professional Adviser—in collaboration with automotive experts—has prepared the program, which includes all data necessary to guide competitors.

You will receive:

The rules of the competition, and the requirements of each program, by forwarding the information indicated in the attached coupon. George Nelson, A. l. A., Professional Adviser, c/o The Architectural Forum, Empire State Building, 350 Fifth Avenue, New York 1, N. Y.

I intend to enter the GENERAL MOTORS competition. Please send me the program, including the conditions governing the competition and awards.

Name______

Address____

City____State__

Check one: Architect ____ Designer ____ Draftsman ____ Student ____

Other Occupation____

AR-2

Announcing Standard Sizes For Bath-Rite Shower Cabinets

Now Architects, Builders, and home owners can make definite post-war plans—and be sure that Bathe-Rite Shower Cabinets will fit those plans when construction begins!

Bathe-Rite engineers have established standardized sizes and will build all post-war shower cabinets to those standards. Not only will this facilitate and speed up planning now, but it will greatly aid specifications and actual construction.

These standardized sizes will, of course, be available

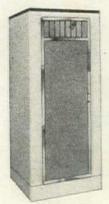
in many attractive designs, to lend themselves readily to modern beauty in every type of surrounding, in homes and public buildings. And they will be rich in many typical — and new — Bathe-Rite "extra-value" features of design, construction, greater strength, easier installation.

Use Bathe-Rite Standardized Sizes in your new plans.

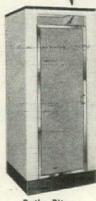


Luxuriaus bathing facilities for the finest residences, offices and institutional buildings. Available with top and glass door. Standard Sizes:

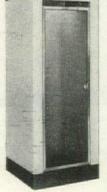
32 x 32 x 80" — 36 x 40 x 80" 36 x 36 x 80" — 40 x 36 x 80" 40 x 40 x 80" (Corner design)



All-Purpose Model No. 3 Sizes: 32 x 32 x 80" 36 x 36 x 80" 40 x 40 x 80" (Corner design)



Bathe-Rite Model No. 2 Sizes: 32 x 32 x 80" 36 x 36 x 80" (Corner design)



Popular-Priced Model No. 1 Size 32 x 32 x 76"

MILWAUKEE STAMPING COMPANY

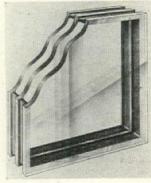
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MILWAUKEE 14, WIS.

Bathe-Rite . . .
TODAY'S QUALITY STANDARD IN SHOWER CABINETS

POSTWAR BUILDING TECHNIQUES

(Continued from page 150)



rounded by two or more panes of glass. The layer of air inside the units is scientifically cleaned, dried and hermetically sealed to prevent dirt and moisture from entering and to prevent the formation of frost or condensation on the inner surfaces. Benefits of double-glass insulation are enjoyed without the seasonal problem of putting up and taking down

the extra sash. In conjunction with thermopane, which presages increased use of large glass areas, films have been developed to eliminate reflections. Applied directly to the glass, these films automatically improve the transmission of light. In addition they can be set to run down the visual scale, reducing any undesired color when seen through the glass. Used on showcases, they will increase visibility of merchandise.

Wall and roof insulation has also come in for its share of improvement during the war. Many materials never before used in this connection are now being applied to the job. It has been discovered that cotton equals or exceeds in insulating values any other material now commercially available. It is much lighter, does not crush or lose resilience if frozen or thawed, and is flame, mildew and vermin resistant. The use of cotton as insulation took on added impetus in 1940 when the U. S. Department of Agriculture inaugurated its program to establish markets for certain qualities of lint cotton. Since 1940 the program has grown from a project requiring 55,000 lbs. to 60 million lbs. in 1944, as reported by the National Cotton Council of America. The material is available with or without moisture-repellent covering, and is being used in homes, factories, trailers, refrigerated cars and trucks. Savings up to one-third of normal fuel consumption have been ob-

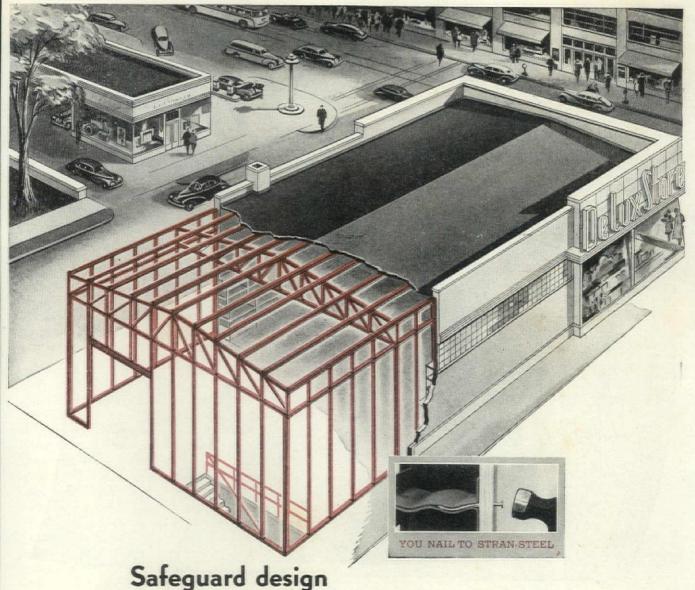
> tained by using cotton insulation, offsetting its cost in a few years' time.

Foamglas insulation, first put into production less than two years ago, is a true glass blown up and cellulated to provide some five million tiny sealed air pockets per cu. ft. It is light weight, weighing only as much as cork, is permanently unaffected by water in any form, is noncombustible, vermin and rodent proof. Foamglas is now produced in rigid slabs 12 in. by 18 in. and in various thicknesses.



Plastic Foam, another new insulating material, is even lighter than Foamglas, weighing only one-seventh as much as cork. It too contains enclosed air spaces which give it great bouyancy plus good in-

(Continued on page 158)



with the permanence of steel

Stran-Steel, the light steel framing member with the patented nailing groove, has taken its place as a universal building material, bringing new efficiency and flexibility to building design. Small homes, apartment buildings, factories and other commercial structures may be built economically and quickly with Stran-Steel—by builders who are accustomed to other types of construction.

Stran-Steel, new and improved, is a precision construction material of unlimited adaptability. Joists, studs and plates are of steel—steel for strength, durability, uniformity and fire-safety—steel for speed of erection, rigidity, freedom from warp and sag—steel for permanence. Design in steel; build the world of tomorrow in steel. Explore the possibilities of standardized Stran-Steel.

Think in terms of

STRAN STEEL

SERVING TODAY IN THE NAVY'S FAMOUS QUONSET HUT

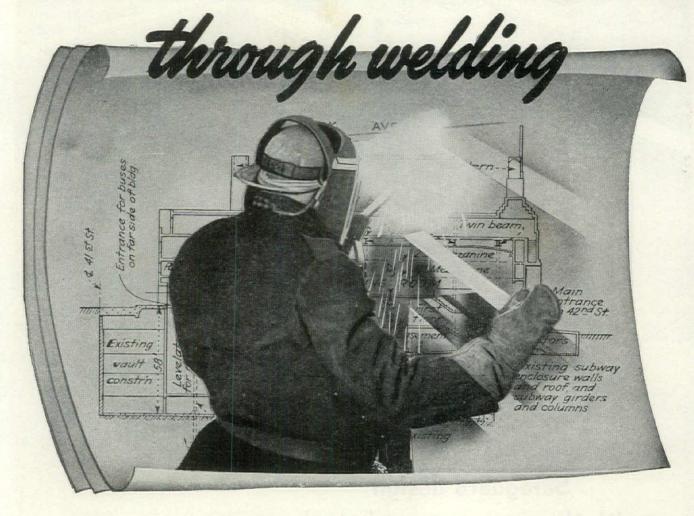
GREAT LAKES STEEL CORPORATION

STRAN-STEEL DIVISION • 37TH FLOOR PENOBSCOT BUILDING
DETROIT 26, MICHIGAN

UNIT OF NATIONAL STEEL CORPORATION

RUARY 1945

BETTER STRUCTURAL DESIGN



LTHOUGH welding has made amazing progress as a structural fabrication method, full advantage is not always taken of the special adaptability of welding to the most modern types of construction. Also, details of design as used in practice, often have not provided for the most efficient use of welding.

For example, in some buildings it is desirable to develop continuity of beams, columns and girders, not only to save steel material, but also to reduce depth of framing and thereby to facilitate the pro-

vision of smooth modern interior surfaces. Here all-welded design facilitates this objective to an unusual degree.

There are many other practical teatures of welding as a structural method that merit full consideration... its demonstrated savings in steel...its quietness on erection work...its more efficient application due to the great increase in the number of trained welders and foremen who are becoming available for welding as war production decreases.

Representatives of Airco's Applied Engineering Division have acquired extensive experience in the application of welding to many types of war and peacetime structures. Architects, engineers and designers are invited to make use of their experience in working out problems of structural design.

Write to Dept. AF, at the New York address.





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SYLVANIA NEWS

ARCHITECTURAL EDITION

FEBRUARY

Published in the Interests of Better Sight and Sound

1945

Sylvania "Long-Slim" Fluorescents Open New Lighting Possibilities

New Lamps Ideal for Continuous-Row Lighting: Two Degrees of Brightness Possible

New long, small-diameter fluorescent lamps soon to go into commercial production at Sylvania Electric will provide the architect with an exceptionally flexible, adaptable source of illumination, opening up entirely new possibilities in the design of lighting installations.

The new lamps will be produced in 42" and 64" lengths, measuring only 34" in diameter; and in 72" and 96" lengths in 1" diameter. They will be of the instant-starting type, requiring no starters, and will have substantially higher lumen outputs per watt than previous types of fluorescent lamps. All four of these new

lamps will use a single-pin base.

The small diameters of these lamps suggest their use in many applications where space is limited or decorative aspects especially important. The longer units are particularly suitable for continuous-row installations.

An entirely novel feature—and one that contributes greatly to flexibility in lighting design—is that the lamps can be operated at either of two current ratings, depending on the ballast used. The lower current rating results in low brightness, desirable in narrow corridor areas and in decorative applications.

While the lamps are currently available only in sample quantities, and the new sockets and ballasts needed for their operation are not expected to be available for several months, the data published in the table below will be of assistance to architects in preliminary planning for the use of this novel, adaptable type of light source.

NEW MINIATURE LAMP

A fifth addition to Sylvania Electric's complete fluorescent line is a 13-watt miniature lamp, 21" long and 5%" in diameter. This lamp is of the conventional starting type, but will require a new ballast for its operation.

With Sylvania standard fluorescent lamps, fluorescent tubing, and the new long-slim units at his disposal, the architect can plan postwar installations for every industrial and commercial requirement. A comparison of these three fluorescent sources will be published in a forthcoming issue of Sylvania News.

THE NEW ADDITIONS TO SYL	VANIA'S	FLUORI	ESCEN	IT LINE
LONG-SLIM LAMPS	CURRENT MILLIAMPERES	APPROX. INITIAL LUMENS	LAN	MP LIFE HRS.
42" T6 42" 42" 3/4"	100 200	900 1400	Life of Long-Slim fluor- escent lamps at 200-mil- liampere operation is ex- pected to be comparable to that of 40-watt stan- dard fluorescent lamps. Definite ratings will be published as soon as life testing is conclusive.	
64" T6 64" 3/4"	100 200	1400 2150		
72" T8 72" 72"	100 200	1400 2350		
96" T8 96" 1"	100 200	1950 3300		
MINIATURE LAMP	CURRENT MILLIAMPERES	APPROXIMATE LAMP LIFE, HI INITIAL LUMENS Daylight 490 1500 on a White 580 3-hr. Cycle		LAMP LIFE, HRS.
21" T5 21" 5%"	160			

*Under specified test conditions

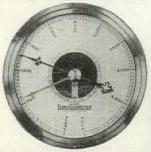
SYLVANIA F ELECTRIC

SYLVANIA ELECTRIC PRODUCTS INC., Salem, Massachusetts

MAKERS OF FLUORESCENT LAMPS, FIXTURES, ACCESSORIES; INCANDESCENT LAMPS,; RADIO TUBES; CATHODE RAY TUBES; ELECTRONIC DEVICES

FEBRUARY 1945

THOSE WHO CAN'T AFFORD TO MAKE ERRORS IN MEASURING VALUABLE STORED LIQUIDS CHOOSE -





LIQUIDOMETER Tank Gauges

"THEY'RE ALWAYS DEPENDABLE"
100% automatic.

No pumps, valves, or auxiliary units needed to read them.

Models available for either remote or direct readings.

Accuracy unaffected by specific gravity of tank liquid.

Approved by Underwriters' Laboratories for gauging hazardous liquids.

Write for complete details.

THE LIQUIDOMETER CORP.



TIME TO RELAX?.. HELL, NO!

THIS is no time to start pulling up the old easy chair . . . not when we all know that only combined effort and all-out cooperation will speed the knock-out punch. Your iron and steel products are vital to the war effort . . . and they'll do a better job if you assure long-lasting protection by the PENNizing process of Quality Hot Dip Galvanizing . . . PENNizing, the lasting protection against corrosion.

HOT DIP

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POSTWAR BUILDING TECHNIQUES

(Continued from page 154)

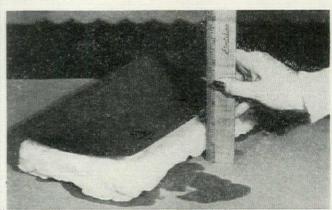
sulation and sound-deadening qualities in comparison to its weight. It is now being used for military applications, but should prove an excellent structural insulation when released for civilian use.

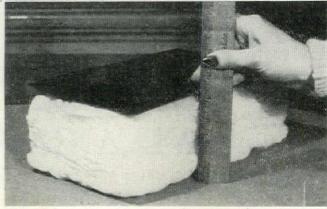
Acoustical insulation is also using synthetic materials. A new acoustical plaster is made of plastic and is absolutely fire-proof, a great advance since many ordinary acoustical materials are combustible. A ½ in. thickness of this plastic obtains a noise reduction coefficient of .60 which is excellent for this type of material and compares favorably to many acoustic tiles of greater thickness. Its low cost makes it available to a great number of buildings where the expense of sound treatment was formerly prohibitive.

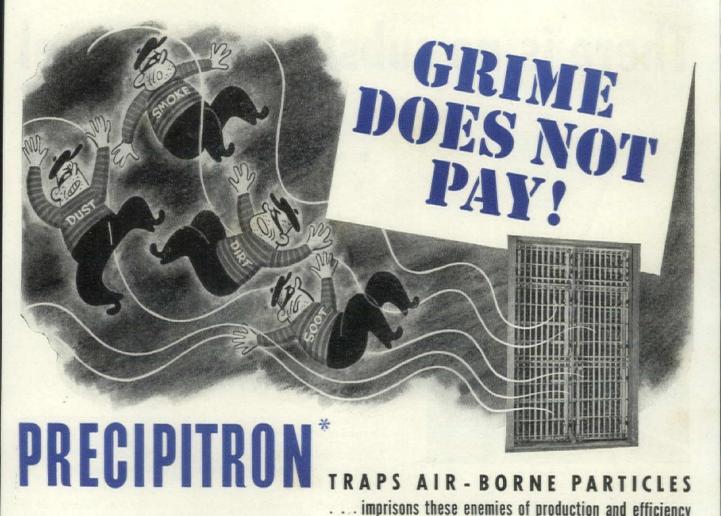
Silicones are the result of more than 40 years of research on silicon-oxygen combinations, and promise to extend the limits of thermal stability far beyond the range of temperatures possible for electrical equipment with conventional insulation. They are manufactured in various forms, but the liquids, impregnated into Fiberglas or asbestos cloth, are used for insulation. Certain types do not freeze at dry ice temperatures and can be used up to 400° or 500° F. Their use has made possible the reduction in size and weight of electrical equipment for a given output, and has greatly increased equipment life. Tested on a 250 KVA, 440 v. generator, silicone insulation was in excellent condition after 3,000 hours at 482° F.—equivalent to 400 yrs. of operation at the normal 266° F. Machines with silicone insulation may be operated where temperatures are far higher than was heretofore possible.

(The third article of this series, covering new equipment, will appear in March.)

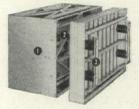
COTTON INSULATION measures only 11/2 in. in height when frozen as compared with its original 4 in. thickness. After thawing, however, it expands, regaining its former measurement of approximately 4 in.







HOW PRECIPITRON WORKS



- 1. A Precipitron cell with ionizer detached to permit a view of the vertical collector plates inside the cell.
- 2. High-voltage wire creates an electrostatic field at the front of the Precipitron cell, charging all dust and dirt particles as they enter.
- 3. The charged particles are drawn to and precipitated on the vertical collector plates which are easily cleaned by flushing.

4. The improved Precipitron power pack provides 13,000 volts d-c to set up the electrostatic field that charges the particles as they enter the cell. and 6,000 volts d-c to the collector plates.



The Electronic Air Cleaner

*Trade-Mark registered in U.S.A.

Public Enemy No. 1 is dirt. It steals millions of dollars annually, in spoilage and deterioration. The hardest dirt to capture is air-borne . . . those microscopic particles of floating dust, smoke, soot, abrasives, fumes. Too long have they hijacked production, robbed efficiency and comfort.

But "grime does not pay" . . . and Westinghouse Precipitron -the Electronic Air Cleaner-is proving it every day in hundreds of industrial plants and buildings of all kinds. It is saving materials, production time, maintenance expense, wherever clean air is vital.

Precipitron employs a new principle of electrostatic air cleaning . . . gives three to five times the efficiency of ordinary mechanical air filters . . . delivers air 90% cleaner. It removes dust particles as small as 1/250,000 of an inch. Operation is simple and silent. There are no moving parts to get out of order. And power cost is low.

Whether you are planning industrial applications now ... or postwar building for the future ... plan to use Precipitron. For complete information call your nearest Westinghouse office. Or, write Westinghouse Electric & Manufacturing Co., P. O. Box 868, Pittsburgh 30, Pa.



PLANTS IN 25 CITIES ...

There is no substitute for steel

... in insulation



Ferro-Therm occupies far less space than mass insulation.



Ferro-Therm is not only a superior insulating material, it is a definite fire stop.



Ferro-Therm is stapled permanently in place; it cannot settle or pack down.

JUST as surely as *any* insulating material is better than none at all, Ferro-Therm *Steel* Insulation has important advantages which are not found in any mass or bulk insulation.

Ferro-Therm

- 1. Reflects 95% of all radiated heat, which makes it the most effective barrier known for resisting the penetration of heat from either side.
- 2. Is not only non-combustible, it reflects heat above 1000° F, and forms a fire stop for wooden framework that will last three to four hours if necessary.
- 3. Completely prevents the penetration of termites, rodents and insects, as it is all-metal.
- **4.** Does not absorb moisture, and does not convey any moisture to framing members, which would cause wood to rot.
- 5. Cannot settle or pack down, as the sheets are stapled permanently in place.
- 6. Has the structural strength and stiffness of steel. It makes a permanent installation, with full efficiency for the life of the building.

Installed in ceiling (or roof) and exterior walls, Ferro-Therm will reduce fuel cost by 25% to 30%. In ceilings (or roof) alone, Ferro-Therm will save 15% to 20% of fuel. In summer, Ferro-Therm will reduce temperatures in rooms underneath by 10° to 12° F.

Ferro-Therm takes up far less space than bulk insulation. And it is light — easy to handle. A carpenter can install 1000 to 1200 square feet in a day, cutting and flanging five sheets at a time.

For reports on the use of Ferro-Therm in important U. S. Army and Navy construction, and by leading authorities on insulation, write today for our comprehensive presentation.

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STEEL INSULATION



Do your Heating Plans include Toridheet Equipment?

That's a question which you may of course answer to yourself.

But we have the privilege of saying this to you: If your plans do include Toridheet Equipment you are moving on sure ground. If they do not include TORIDHEET it is not too soon to check with TORIDHEET.

Toridheet is in the heating equipment business on the modern side. What do we mean by that? Just this—that the history of Toridheet is a record of continuous progress. We have not been hampered by old ideas but have continuously moved forward in our thinking, in our design and in our policies, not simply with, but generally ahead of the industry. Toridheet has always dared to be several steps in advance.

The significance of that fact to you now is twofold:

First, it definitely implies that Toridheet equipment is already in the modern swing. The minute conditions permit we can shift into production with products that definitely meet the demand of "tomorrow".

Second, it signifies that in Toridheet products, immediately after the war you will get heating equipment that has been proven and tested from the standpoint of all known measures of heating efficiencies. That is up-to-the-minute in accessories and conveniences. That it fits definitely into all modern plans for space conservation. That all Toridheet units are sweetly good looking in a business-like way—and this is important... backed by a nation-wide reputation for dependability, ease of maintenance and high efficiency.

The TORIDHEET LINE includes: TORIDHEET OIL BURNERS, OIL BURNER BOIL-ERS, AIR CONDITIONERS and WATER HEATERS. Also GAS HEATING UNITS and COAL HEATING UNITS.

If you seek AUTOMATIC Heating at its highest development you will give careful consideration to TORIDHEET. Shall we send you our newest literature?

TORIDHEET DIVISION

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Coal and Gas Furnaces · Water Heaters



LAMENTATION, a diptych panel by Hugo van der Goes from the Kunsthistorisches Museum in Vienna, expresses the deep melancholy present in so many of this master's works. The "Head of a Shepherd" (below) is a detail from his Nativity, the Pontinari altarpiece; the Uffizi Gallery, Florence.

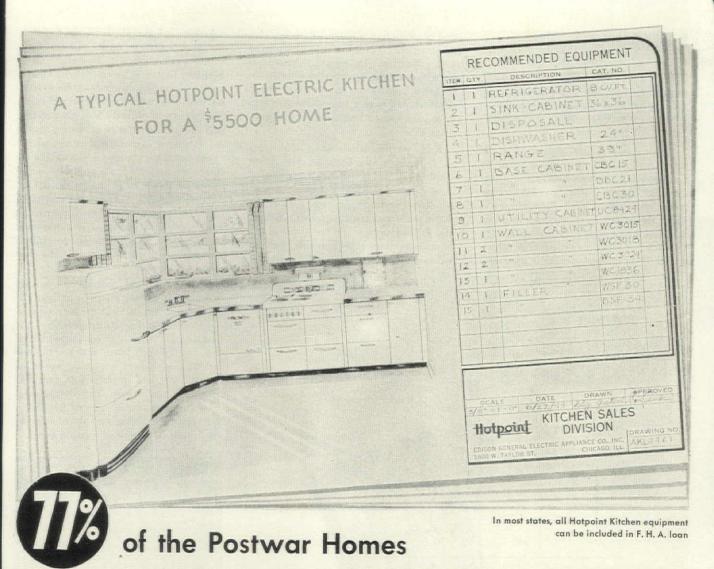


THE LAST FLOWERING OF THE MIDDLE AGES. By Baron Joseph van der Elst. Doubleday, Doran & Co., Inc. Garden City, N. Y. 91/4 x 121/4. Illustrated. \$7.50.

"In this turbulent twentieth century it may seem strange to stop and consider, even cursorily, the people and painters of Flanders of five centuries ago. What have they to do with us; or we with them? What possible enlightenment or inspiration does the medieval world offer us today? And of what value to a nation engaged in fighting the most desperate war in its history are the richly colored, but frequently quaint and childlike, little panel paintings which represent the high flowering of art in the Low Countries during the fifteenth century?" The author poses this question in his introduction-a question which will spring promptly into the minds of most war-worried contemporists. For Baron van der Elst, a scholar and authority on Flemish art, the Middle Ages and their culture have assumed a renewed importance in the light of current events. He finds many significant social and political, if not artistic, parallels: workers finding a voice in government, a vigorous and articulate middle class, the awareness of a new world expansion, the same sense of expectancy and imminent change. However, he deems the fifteenth century the least understood and most severely criticized of all periods and-by examining the life and character of the time-seeks to achieve a deeper and more mature popular understanding of Flemish culture.

Baron van der Elst's book is more than the usual color-plate parade of period art. Beside his introduction to Flemish painting, he reviews the history and social character of the century in an intimate and heartfelt way. Most of this background material is furnished in the first part of the book. The second part is devoted to the biographical and simplified artistic interpretation of the work of some of the more important Flemish masters: van Eyck, Christus, van der Weyden, Bouts, van der Goes, Memling, David, Bosch and Breugel. Part III contains a general concluding discussion of Flemish style. The author does a creditable job of relating the historic events and social influences to the masterpieces and their subjects, but to the truly avid student, much will be missing. For example, he points to the popular concurrent expressions of realism and mysticism but touches only superficially on the underlying causes of such contradictory characteristics. An abundance of anecdotes and local color successfully convey a prefabricated camaraderie but leave a good many historic, social and political manifestations unexplained. Obviously intended for popular consumption, the book has, nevertheless, a naive charm which deserves more praise than criticism. But by its very hominess and complete absence of conventional artistic criticism, the text lacks real authority, though it has the attribute of effectively animating the day-by-day life of a remote and little understood time.

In view of current restrictions and its reasonable price, The Last Flowering of the Middle Ages, is as fine an edition as has recently appeared. It contains sixteen excellent color reproductions and a quantity of black and white plates, all full page size. As a conclusive artistic study and criticism, the book will never achieve top rank, but as an addition to the library of the novice or the dilettante, it will surely hold its own as a warm and handsome recapitulation of one of the richest periods in the history of painting. (Continued on page 164)



WILL BE ABLE TO AFFORD ELECTRIC KITCHENS!

And Hotpoint's Powerful Pre-Selling Advertising Has Created a Demand for Electric Kitchens...

A PREDICTION from the United States Chamber of Commerce that "more than seven out of ten postwar homes will cost \$3,000 or over" assures a price range in homes that will include all-electric kitchens. After the last war there was a building boom which featured the ultra-modern bathroom. Today the American housewife is well aware that her home is only as modern as its kitchen. Hotpoint's hard hitting advertising campaign urging the purchase of war bonds now for postwar building has met with a tremendous response. This campaign is continuing and the growing

trend toward planned kitchens is fact, not fancy. Over 30,000 inquiries per month, each containing ten cents for the Hotpoint planning guide, "Your Next Kitchen," are proof of the interest in, and consumer preference for, the planned electric kitchen.

Building Prospects Are Bright

Victory will find America with an estimated "pent-up" purchasing power of over a hundred billion dollars. Your future market is unlimited . . . plan now to take advantage of it. Design and build homes with modern functional kitchens.

In speculative building, electric kitchens will speed turnover and reduce your financing costs. Remodelling will be a big field after the war; surveys show that from three to five times as many as will buy or build new homes, plan to remodel. Also, many people with old, worn appliances, such as ranges, refrigerators, etc., will install a new, planned kitchen instead of replacing individual appliances.

Write Today

Hotpoint's expert staff of kitchen designers is ready to offer you suggestions on any kitchen planning or construction problems. Write for details of "Hotpoint Kitchen Planning Service."

Edison General Electric Appliance Co., Inc. 5651 West Taylor Street, Chicago 44, Ill.

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CLOTHES DRYERS · DISHWASHERS · DISPOSALLS · CABINET-SINK · STEEL CABINETS

(Continued from page 162)

NEW ARCHITECTURE and City Planning. Edited by Paul Zucker. Philosophical Library, New York. 694 pp. Illustrated. 61/4 x 9. \$10.

Symposia, like magazine digests, leave many readers with a gnawing sense of frustration. For those who fall into this category, Editor Zucker's volume, New Architecture and City Planning, will probably produce a violent case of hives. It contains essays by no less than 59 contributors, grouped in six sections which deal with building types, new materials

and construction methods, housing, city and regional planning, monumentality and education. Its omnibus character notwithstanding, however, the list of authors includes some of the best known professional names and their subjects have been chosen with admirable appropriateness.

This participation of talent was brought about by a common recognition of the need for teamwork among the various branches of the profession as well as citizens and administrators, now, and in the years to come. In his introduction, Mr. Zucker says: "We need this teamwork more than self-expression just as we need more interest in the life we live

together and the work we do together. Social orientation must balance functional expression. . . The real job of building before us has to be seen clearly and universally as a combination of technical, social and actually spiritual tasks. This threefold obligation of all building will be understood as soon as we realize the formative educational power of the environment we create . . . The avalanche composed of technical cause and social effect, of social effect and spiritual influence, of spiritual influence and creative expression will, when it begins to move, develop a suction and momentum of its own." To give the proper initial guidance to this momentum is the purpose of the book.

The symposium introduces neither dreamy prognostications nor radical ideas. Instead, it is a cross-section of the clearest professional thinking of the past fifteen years. In condensed form, the reader will find many of these hitherto laid down in such works as Space, Time and Architecture, Can Our Cities Survive? etc. The authors approach specific and concrete phases of the over-all problem and its relation to the future in a down-to-earth manner.

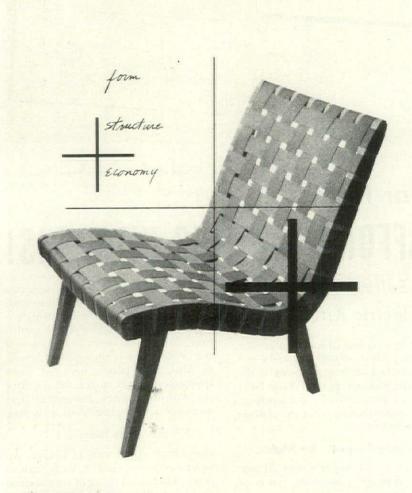


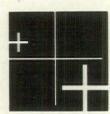
Civic center: Denver, Colo.

Perhaps the freshest and most topical section of the book is one entitled, The Problem of New Monumentality, and comprised of five short articles by Sigfried Gedion, George Nelson, Louis I. Kahn, Philip Goodwin and Ernest Fiene. Dealing more in abstractions than any other group of contributors, these five attempt to open the way for the reconquest of the monumental expression by marshaling all creative forces and restoring a community pattern of life.

Taken individually, many of the articles—and especially the most interesting—seem painfully over-abridged. But since there is a limit to the possible thickness of a volume and since more expansive works are available, this shortcoming is not too serious. Condensed though it may be, the book lacks neither authority nor importance and should be considered a valuable compendium of contemporary architectural and planning trends in the U. S.

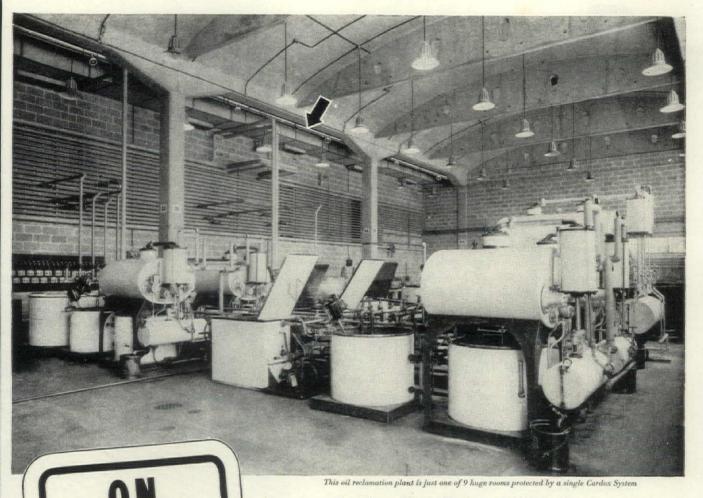
(Continued on page 168)





this mark of the three plus signs . . . symbols of clean design, sound construction and low cost will from now on help you to identify our products: furniture . . . equipment for living . . . developed by our Planning Unit. Send your name for our new catalog to 601 Madison Avenue, New York 22, N.Y.

H. G. KNOLL associates



Cardox Fire Extinguishing Systems Give New Protection Scope with POUNDS or TONS of Carbon Dioxide

Inexpensive carbon dioxide is widely recognized as the fastest non-damaging fire extinguishing agent. Through Cardox methods of control and engineered application, carbon dioxide is supplied instantly . . . in pounds for small fires, in tons for large ones . . . to give new protection against a wide variety of indoor and outdoor hazards.

Effective Coverage for One Hazard or Many

The enhanced extinguishing performance of Cardox engineered applications of carbon dioxide for effective coverage of one hazard or many is due to a combination of basic factors: From ½ to 125 tons of Cardox CO₂... stored at 0°F and 300 p.s.i. in a single storage unit . . . is readily available for mass application at high rate, and for total flooding (when necessary) of large areas, with ample reserve for new emergencies. It has uniform extinguishing characteristics regardless of plant or atmospheric

conditions. It provides high CO₂ "snow" yield for increased cooling effect upon fire zone and combustible. This heavy CO₂ snow yield also provides effective projection through relatively great distance . . . even outdoors through strong winds.

On the basis of this enhanced performance, Cardox Fire Extinguishing Systems have been given many of Industry's toughest peace-time and war-time fire protection assignments.

Bulletin 625 should be in the files of everyone responsible for fire protection in industry. Ask for a free copy today on company letterhead.

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CARDOX

Cardox CO₂ is supplied instantly in pounds or tons from a single Storage Unit containing 500 pounds to 125 tons at controlled low temperature of 0°F and 300 p.s.i.

Where Fire

Hazards Are

Toughest

The LINCOLN TUNNEL APPROACH



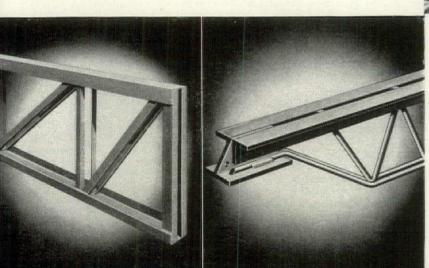
From coast to coast, bridge builders have been quick to recognize and

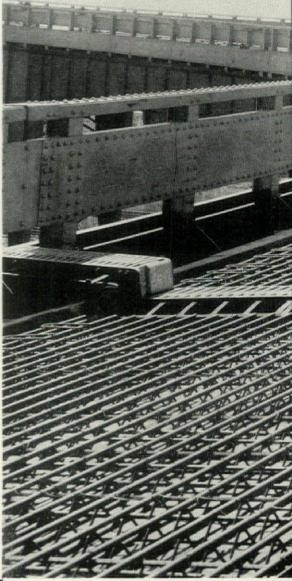
apply the advantages of the CECO welded reinforcing truss. Its use for concrete floors in the Lincoln Tunnel approach, the Golden Gate Bridge, and the San Francisco-Oakland Bay bridge all attest to the expert fabrication, and close engineering tolerances which insure accurate and economical placement of reinforcing materials. Ceco steel trusses are assembled in jigs and arc welded in a manner similar to that used so successfully in the manufacture of CECO steel joists, which are as invaluable to builders of apartments, hospitals, offices, schools, and residences, as the Ceco trusses are to builders of monumental bridges.

The Ceco steel joist is of special interest today with the acute lumber shortage and provides these definite advantages to all builders of light occupancy buildings:

- 1. Sturdy lightweight floor and roof construction.
- 2. Eliminates warping, shrinkage and dead rot.
- Convenience and ease of installation—easy concealment of heating, plumbing and electrical wiring systems.
- 4. Reduction of property loss through fire.

Ceco manufactures a complete line of joists including standard open web steel joists, the Ceco nailer joist, and the Ceco longspan joist. And maintains a staff of experienced construction engineers to assist with your construction problems. These engineers will furnish estimates, check details and designs, make recommendations and suggestions for the improvement of your projects. Be sure to call on them and let CECO engineering skill aid you in present and post war construction.





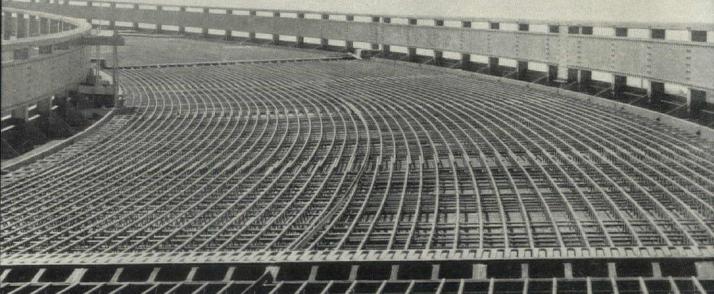
Ceco open web steel joists: (left) wide top chor provides greater lateral rigidity, gives greate bearing surface, increasing efficiency of floo and roof slabs. The bottom chord permits eas positive attachment of ceiling lath by standar tie wires which stay attached.

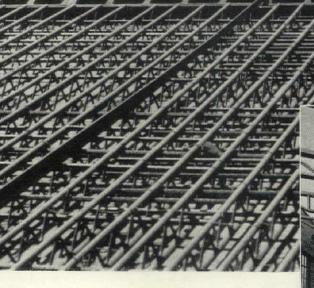
Ceco longspan joists: (far left) clear openings uto 64 ft. One story stores or garages can be erected without use of inside columns with Ceclongspans.

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ENGINEERING MAKES THE BIG DIFFERENCE IN CECO

USHIONED ON STEEL TRUSSES BY CECO





HER CECO ENGINEERED PRODUCTS:

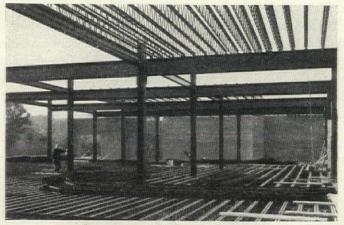
types of industrial and residential steel adows, steel doors, metal frame screens, tal lath, metal weatherstrips, steel roof ik, Meyer flange and adjustable type elforms, adjustable shores and clamps, acrete reinforcing bars, and welded fabric.

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Ceco longspan joists increase floor efficiency by reducing number of columns.



Ceco open web steel joists provide fire resistance and low maintenance cost.

ONSTRUCTION PRODUCTS

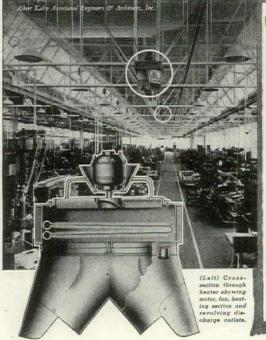
(Continued from page 164)

ARCHITECTURE IN THE NETHERLANDS. By Paul Bromberg. The Netherlands Information Bureau, New York. 85 pp. Illustrated. 61/4 x 9.

The striking resemblance between this booklet and its American precursor, Built in USA, can be easily explained by the fact that Mrs. Elizabeth Mock of the Museum of Modern Art assisted in its preparation. The Dutch version, however, includes a sprinkling of traditional architecture, some interiors and a paint-



City Hall: Hilversum



ONE FACTORY MAN TELLS ANOTHER:



Say Tom, it was a lucky day for us when that heating contractor persuaded the boss to install those Wing Revolving Heaters. Remember haw we all had to work with our coats on during the winter?

Do 19 And how production slowed up? It was too darn cold to work. Fred, I'll bet a hat the increase in production for next winter alone will almost pay for the installation of these new heaters.

You're right Tom. That heating contractor sure knew what he was talking about.

WING Revolving HEATERS

ELIMINATE HOT SPOTS AND COLD SPOTS

One of the first noticeable effects of installing Wing Revolving Unit Heaters is the thorough, uniform distribution of heat accomplished by the slowly revolving discharge outlets. Cold corners are eliminated; there are no sickening concentrated blasts of hot air; bulky machinery or packing cases do not shut off the distribution of the heated air.

In addition, a sensation of fresh, live, invigorating warmth is enjoyed by the workers, resulting naturally in increased efficiency. Indeed, this latter effect can be secured in summer as well, for, with the steam turned off, the fans and the revolving discharge outlets produce a delightful cooling effect that is equally effective in maintaining production on the hottest days.

Write for a copy of Bulletin HR-4

L. J. Wing Mfg. Co.

151 W. 14th St., New York 11, N. Y.

Factories: Newark, N. J., Montreal, Canada





St. Augustine Church: Amsterdam

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Do your Heating Plans include Toridheet Equipment?

That's a question which you may of course answer to yourself.

But we have the privilege of saying this to you: If your plans do include Toridheet Equipment you are moving on sure ground. If they do not include TORIDHEET it is not too soon to check with TORIDHEET.

Toridheet is in the heating equipment business on the modern side. What do we mean by that? Just this—that the history of Toridheet is a record of continuous progress. We have not been hampered by old ideas but have continuously moved forward in our thinking, in our design and in our policies, not simply with, but generally ahead of the industry. Toridheet has always dared to be several steps in advance.

The significance of that fact to you now is twofold:

First, it definitely implies that Toridheet equipment is already in the modern swing. The minute conditions permit we can shift into production with products that definitely meet the demand of "tomorrow".

Second, it signifies that in Toridheet products, immediately after the war you will get heating equipment that has been proven and tested from the standpoint of all known measures of heating efficiencies. That is up-to-the-minute in accessories and conveniences. That it fits definitely into all modern plans for space conservation. That all Toridheet units are sweetly good looking in a business-like way—and this is important... backed by a nation-wide reputation for dependability, ease of maintenance and high efficiency.

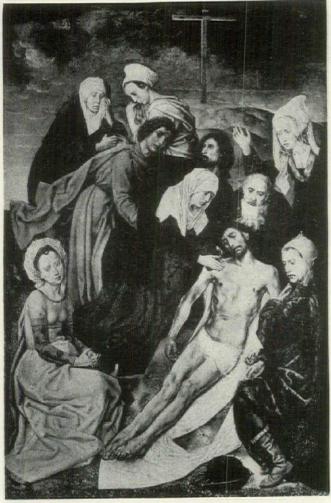
The TORIDHEET LINE includes: TORIDHEET OIL BURNERS, OIL BURNER BOIL-ERS, AIR CONDITIONERS and WATER HEATERS. Also GAS HEATING UNITS and COAL HEATING UNITS.

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LAMENTATION, a diptych panel by Hugo van der Goes from the Kunsthistorisches Museum in Vienna, expresses the deep melancholy present in so many of this master's works. The "Head of a Shepherd" (below) is a detail from his Nativity, the Pontinari altarpiece; the Uffizi Gallery, Florence.

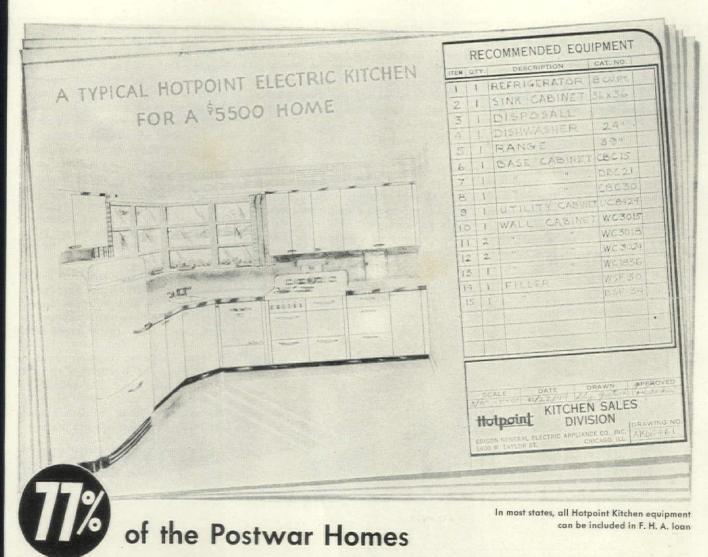


THE LAST FLOWERING OF THE MIDDLE AGES. By Baron Joseph van der Eist. Doubleday, Doran & Co., Inc. Garden City, N. Y. 91/4 x 121/4. Illustrated. \$7.50.

"In this turbulent twentieth century it may seem strange to stop and consider, even cursorily, the people and painters of Flanders of five centuries ago. What have they to do with us; or we with them? What possible enlightenment or inspiration does the medieval world offer us today? And of what value to a nation engaged in fighting the most desperate war in its history are the richly colored, but frequently quaint and childlike, little panel paintings which represent the high flowering of art in the Low Countries during the fifteenth century?" The author poses this question in his introduction-a question which will spring promptly into the minds of most war-worried contemporists. For Baron van der Elst, a scholar and authority on Flemish art, the Middle Ages and their culture have assumed a renewed importance in the light of current events. He finds many significant social and political, if not artistic, parallels: workers finding a voice in government, a vigorous and articulate middle class, the awareness of a new world expansion, the same sense of expectancy and imminent change. However, he deems the fifteenth century the least understood and most severely criticized of all periods and-by examining the life and character of the time-seeks to achieve a deeper and more mature popular understanding of Flemish culture.

Baron van der Elst's book is more than the usual color-plate parade of period art. Beside his introduction to Flemish painting, he reviews the history and social character of the century in an intimate and heartfelt way. Most of this background material is furnished in the first part of the book. The second part is devoted to the biographical and simplified artistic interpretation of the work of some of the more important Flemish masters: van Eyck, Christus, van der Weyden, Bouts, van der Goes, Memling, David, Bosch and Breugel. Part III contains a general concluding discussion of Flemish style. The author does a creditable job of relating the historic events and social influences to the masterpieces and their subjects, but to the truly avid student, much will be missing. For example, he points to the popular concurrent expressions of realism and mysticism but touches only superficially on the underlying causes of such contradictory characteristics. An abundance of anecdotes and local color successfully convey a prefabricated camaraderie but leave a good many historic, social and political manifestations unexplained. Obviously intended for popular consumption, the book has, nevertheless, a naive charm which deserves more praise than criticism. But by its very hominess and complete absence of conventional artistic criticism, the text lacks real authority, though it has the attribute of effectively animating the day-by-day life of a remote and little understood time.

In view of current restrictions and its reasonable price, The Last Flowering of the Middle Ages, is as fine an edition as has recently appeared. It contains sixteen excellent color reproductions and a quantity of black and white plates, all full page size. As a conclusive artistic study and criticism, the book will never achieve top rank, but as an addition to the library of the novice or the dilettante, it will surely hold its own as a warm and handsome recapitulation of one of the richest periods in the history of painting. (Continued on page 164)



WILL BE ABLE TO AFFORD ELECTRIC KITCHENS!

And Hotpoint's Powerful Pre-Selling Advertising Has Created a Demand for Electric Kitchens...

A PREDICTION from the United States Chamber of Commerce that "more than seven out of ten postwar homes will cost \$3,000 or over" assures a price range in homes that will include all-electric kitchens. After the last war there was a building boom which featured the ultra-modern bathroom. Today the American housewife is well aware that her home is only as modern as its kitchen. Hotpoint's hard hitting advertising campaign urging the purchase of war bonds now for postwar building has met with a tremendous response. This campaign is continuing and the growing

trend toward planned kitchens is fact, not fancy. Over 30,000 inquiries per month, each containing ten cents for the Hotpoint planning guide, "Your Next Kitchen," are proof of the interest in, and consumer preference for, the planned electric kitchen.

Building Prospects Are Bright

Victory will find America with an estimated "pent-up" purchasing power of over a hundred billion dollars. Your future market is unlimited...plan now to take advantage of it. Design and build homes with modern functional kitchens.

In speculative building, electric kitchens will speed turnover and reduce your financing costs. Remodelling will be a big field after the war; surveys show that from three to five times as many as will buy or build new homes, plan to remodel. Also, many people with old, worn appliances, such as ranges, refrigerators, etc., will install a new, planned kitchen instead of replacing individual appliances.

Write Today

Hotpoint's expert staff of kitchen designers is ready to offer you suggestions on any kitchen planning or construction problems. Write for details of "Hotpoint Kitchen Planning Service."

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REFRIGERATORS - RANGES - WATER HEATERS - HOME FREEZERS - WASHERS AND IRONERS
CLOTHES DRYERS - DISPOSALLS - CABINET-SINK - STEEL CABINETS

BOOKS

(Continued from page 162)

NEW ARCHITECTURE and City Planning. Edited by Paul Zucker. Philosophical Library, New York. 694 pp. Illustrated. 61/4 x 9. \$10.

Symposia, like magazine digests, leave many readers with a gnawing sense of frustration. For those who fall into this category, Editor Zucker's volume, New Architecture and City Planning, will probably produce a violent case of hives. It contains essays by no less than 59 contributors, grouped in six sections which deal with building types, new materials

and construction methods, housing, city and regional planning, monumentality and education. Its omnibus character notwithstanding, however, the list of authors includes some of the best known professional names and their subjects have been chosen with admirable appropriateness.

This participation of talent was brought about by a common recognition of the need for teamwork among the various branches of the profession as well as citizens and administrators, now, and in the years to come. In his introduction, Mr. Zucker says: "We need this teamwork more than self-expression just as we need more interest in the life we live

together and the work we do together. Social orientation must balance functional expression. . . The real job of building before us has to be seen clearly and universally as a combination of technical, social and actually spiritual tasks. This threefold obligation of all building will be understood as soon as we realize the formative educational power of the environment we create . . . The avalanche composed of technical cause and social effect, of social effect and spiritual influence, of spiritual influence and creative expression will, when it begins to move, develop a suction and momentum of its own." To give the proper initial guidance to this momentum is the purpose of the book.

The symposium introduces neither dreamy prognostications nor radical ideas. Instead, it is a cross-section of the clearest professional thinking of the past fifteen years. In condensed form, the reader will find many of these hitherto laid down in such works as Space, Time and Architecture, Can Our Cities Survive? etc. The authors approach specific and concrete phases of the over-all problem and its relation to the future in a down-to-earth manner.



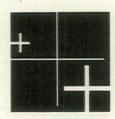
Civic center: Denver, Colo.

Perhaps the freshest and most topical section of the book is one entitled, The Problem of New Monumentality, and comprised of five short articles by Sigfried Gedion, George Nelson, Louis I. Kahn, Philip Goodwin and Ernest Fiene. Dealing more in abstractions than any other group of contributors, these five attempt to open the way for the reconquest of the monumental expression by marshaling all creative forces and restoring a community pattern of life.

Taken individually, many of the articles—and especially the most interesting—seem painfully over-abridged. But since there is a limit to the possible thickness of a volume and since more expansive works are available, this shortcoming is not too serious. Condensed though it may be, the book lacks neither authority nor importance and should be considered a valuable compendium of contemporary architectural and planning trends in the U. S.

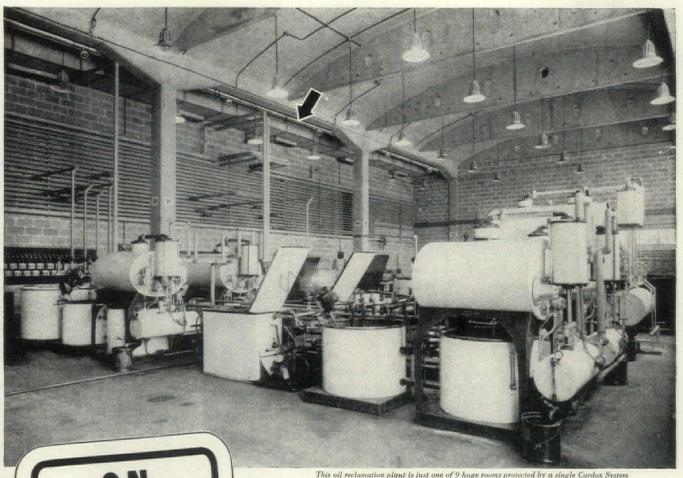
(Continued on page 168)





this mark of the three plus signs . . . symbols of clean design, sound construction and low cost will from now on help you to identify our products: furniture . . . equipment for living . . . developed by our Planning Unit. Send your name for our new catalog to 601 Madison Avenue, New York 22, N.Y.

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of everyone responsible for fire protection in industry. Ask for a free copy today on company letterhead.

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Where Fire

Hazards Are

Toughest

The LINCOLN TUNNEL APPROACH



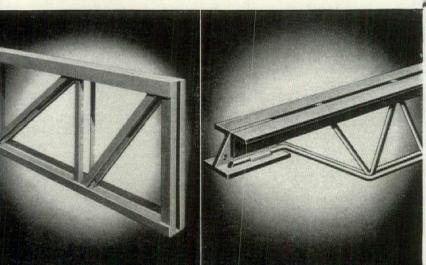
From coast to coast, bridge builders have been quick to recognize and

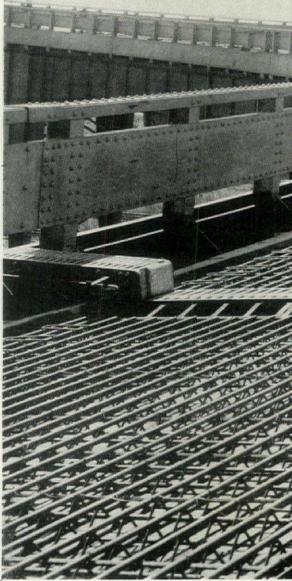
apply the advantages of the CECO welded reinforcing truss. Its use for concrete floors in the Lincoln Tunnel approach, the Golden Gate Bridge, and the San Francisco-Oakland Bay bridge all attest to the expert fabrication, and close engineering tolerances which insure accurate and economical placement of reinforcing materials. Ceco steel trusses are assembled in jigs and arc welded in a manner similar to that used so successfully in the manufacture of CECO steel joists, which are as invaluable to builders of apartments, hospitals, offices, schools, and residences, as the Ceco trusses are to builders of monumental bridges.

The Ceco steel joist is of special interest today with the acute lumber shortage and provides these definite advantages to all builders of light occupancy buildings:

- 1. Sturdy lightweight floor and roof construction.
- 2. Eliminates warping, shrinkage and dead rot.
- Convenience and ease of installation—easy concealment of heating, plumbing and electrical wiring systems.
- 4. Reduction of property loss through fire.

Ceco manufactures a complete line of joists including standard open web steel joists, the Ceco nailer joist, and the Ceco longspan joist. And maintains a staff of experienced construction engineers to assist with your construction problems. These engineers will furnish estimates, check details and designs, make recommendations and suggestions for the improvement of your projects. Be sure to call on them and let CECO engineering skill aid you in present and post war construction.





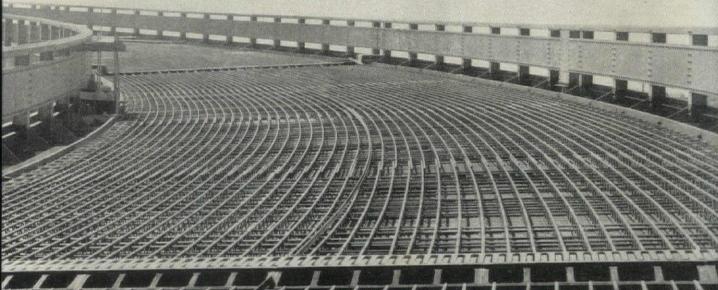
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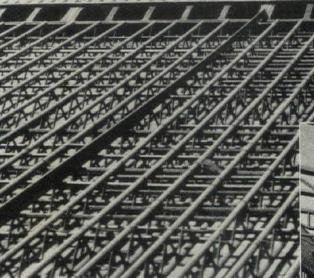
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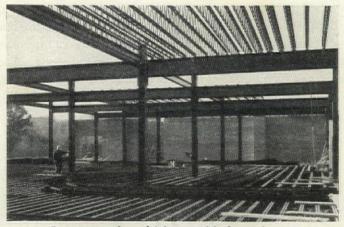
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(Continued from page 164)

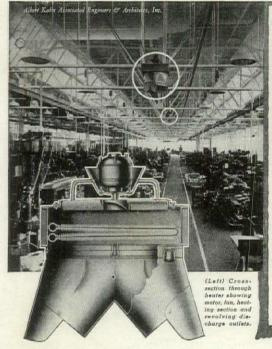
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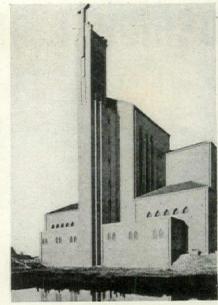
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St. Augustine Church: Amsterdam

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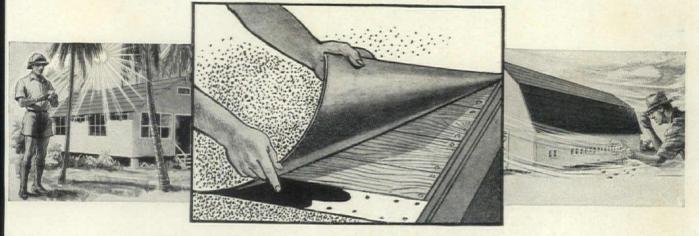
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ONLY WITH CONTROLLED PRODUCTION

could Bird create this tornado-proof roofing



Proslate roofing, with concealed nails and sealed laps, has been proved by tropical suns and northern storms.

There's a "reason-why" behind Bird Proslate Roll Roofing that everyone interested in better building materials should know. It's a hard fact story that's being written in wear-records on barns, sheds and industrial buildings all over the country. For only with Controlled Production could Bird produce this super-roofing.

Every step from raw materials to the finished product is controlled... completely controlled. The dry felt base — which largely determines the inherent strength of the roofing — is made in the Bird plant under the most rigid laboratory specifications. The fibres are cross-felted for greater strength and increased absorbency of the asphalt saturant, while this asphalt too is controlled, refined to Bird's specifications, with final treatment in Bird's own stills.

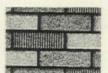
When this extra-tough base has been supersaturated with Bird's special asphalt, the surface is covered with mineral granules of controlled size and quality . . And every step is laboratory controlled, checked, tested Other examples of Controlled Production:



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BIRD TRI-TAB HEX Shingle—colorful, draftfree—wind-resistant.



BIRD INSULATED SID-ING, in many attractive brick tones. and examined for the tiniest imperfections.

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This survey, to get the desired results,

requires intelligence and energy on the part of all its roofers.

Then, Johns-Manville constantly is developing new roofing materials and methods to provide for future needs and conditions. This means that its roofers must be progressive and able to learn and use new and improved roofing techniques and products.

Finally, roofing is but one of the many products Johns-Manville furnishes to industry, and the reputation these products have established makes it imperative that I-M Roofings be of the same high quality and that they be properly applied by capable reliable contractors.



You can identify the Approved J-M Roofing Contractor by this yellow and blue sign . . . and by this Johns-Manville Trade Mark Heading in the Classified Telephone Directory under "Roofers."



So, in specifying a Johns-Manville roof, you obtain not one but two advantagesquality materials-and what is equally important-good workmanship.

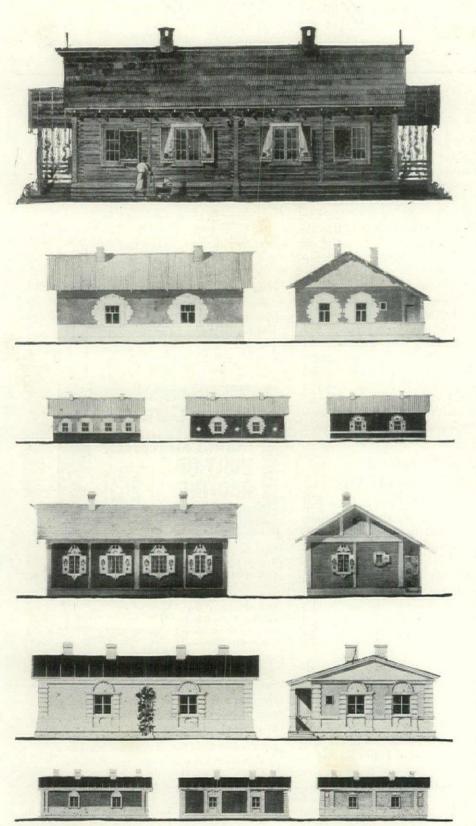
But why not get the full story? Write for Booklet BU-30A. It contains complete information, drawings, and specifications. Address Johns-Manville, 22 East 40th Street, New York 16, N. Y.



JM Johns-Manville Asbestos BUILT-UP ROOFS

PREFABRICATION

RUSSIAN PREFABRICATION is widely used in reconstruction but hampered by obsolete building materials.



WINNING DESIGNS submitted in an all-union competition for a prefabricated house for the Ukranian SSR. The elevations second from top received first prize. These are intended for sheet board construction. Despite advanced prefabrication methods, now in use throughout the Soviet Union, traditional color and ornate detailing are still much in evidence.

Traditionally, building in the USSR has been a seasonal operation employing migrant labor that drifted from city to village alternating construction and agricultural work according to the weather and the time of year. Naturally, the most popular type of building has always been wood frame or log since Russia possesses one-third of the world's lumber supply, although the building industry has remained relatively undeveloped as compared to US standards. (Not infrequently, building brick are made by hand on the site.) Before the outbreak of the war, however, the USSR held second place among the nations producing plywood and this industry has since expanded considerably. With these natural and industrial resources, the anticipated development of new building materials of other types and the immediate need for emergency reconstruction, the current revival of prefabrication is the logical result.

It must be called a revival since the experiments which took place between 1925 and 1935 were a complete failure. When the USSR's giant industrialization program brought great influxes of population to the larger cities, an acute housing shortage resulted. As a partial remedy prefabrication was introduced. Although plants erected during this period in Leningrad, Kineshma and Beshitza turned out several thousand dwellings that are still in use, the buildings were generally found to be inadequate for resisting the rigorous Russian climate, and as a result, prefabrication was abandoned. The original system adopted was one of wood panels consisting of frame and siding and filled with sawdust, crushed alabaster or peat for insulation.

Today, new systems of manufacture are being studied and developed by the Institute of Construction Technique, a department of the USSR Academy of Architecture. Those that have proven most successful are generally similar to our own. It might be expected that disparate tradition, economy, transportation facilities and building standards would produce divergent results in the two countries, yet the final products are very much alike.

As can be seen from the entries for the recent all-Union prefabrication competition shown on these pages, the USSR has made little concession to

(Continued on page 174)



There are many ways glass can be used to make a school building more efficient. Clear, when you want both light and visibility. Translucent, when you want light, but privacy. Opaque or clear, for smooth, hard, acid-resisting surfaces. Glass has many characteristics which combine to make it a versatile and practical material in the hands of the school architect. For latest information on the many types of glass available, see Sweet's File for 1945, or write to Libbey-Owens-Ford Glass Co., 1525 Nicholas Building, Toledo 3, Ohio.

DAYLIGHT ENGINEERING. Bring in the sunlight to make rooms more pleasant—to prevent restlessness. By providing adequate daylight you reduce eye fatigue...especially important for children whose eyes are still developing.

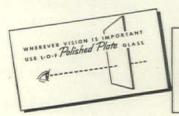
Thermopane, the new Libbey Owens Ford windowpane that insulates, makes large window areas practical in any climate. Adds comfort . . . saves heating costs. Write for booklet about this new double-glass, sealed, insulating unit.



CLEAN, ATTRACTIVE LUNCH-ROOMS. Counters and table tops of smooth L·O·F Vitrolite are easy to keep sparkling clean. Vitrolite provides an excellent opportunity to give the lunchroom color, with a surface that never needs refinishing.

MIRRORS are an effective aid in teaching proper dress and posture. Provide them in full length sizes in washrooms, cloakrooms, gymnasiums and home economics classrooms. To be sure of getting truer reflections, specify mirrors made with Libbey Owens Ford Plate Glass.





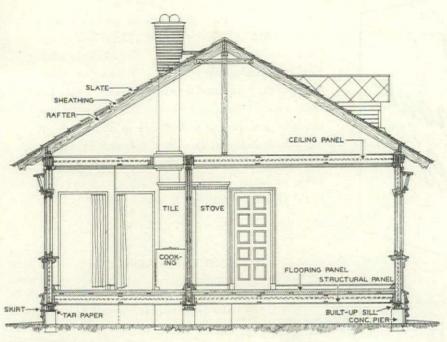


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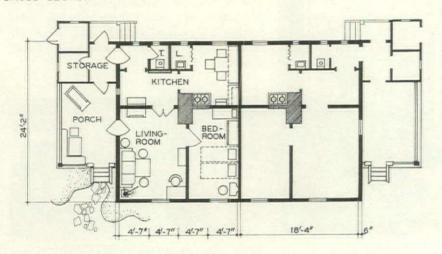
a Great Name in GLASS

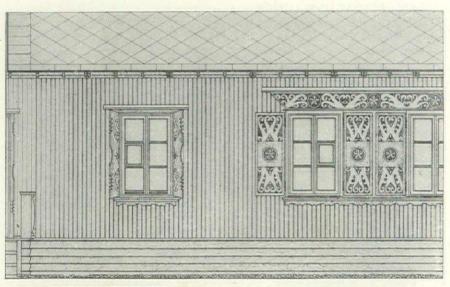
PREFABRICATION

(Continued from page 172)



CROSS SECTION





TYPICAL PREFABRICATED HOUSE, shown in section, plan and detail, illustrates the divergent European conception of housing standards. The unfamiliar separation and location of the plumbing fixtures, all-purpose use of a single sink and sprawling kitchen arrangement are reminiscent of Churchill Villa, the industrialized house which the British government plans to mass-produce in its war factories.

contemporary design trends, at least as far as prefabricated dwellings go. To Americans, these designs look more as though they were intended as props for a scene in Boris Godonov than as postwar housing. But, their quaintness and intricacy notwithstanding, none has the jerry-built starkness so often found in our own low-cost building design.

The USSR anticipates an extensive prefabrication program with factories located at the source of the raw materials and in the centers of regions where widespread building activity will take place. In addition to new plant construction, many wartime aviation and shipbuilding plants will be converted to the building industry. The war has already developed Russian skill in the production of asbestos sheets, a variety of finish materials. light weight insulating materials, lacquers, glues and paints. The outstanding problems that remain are delivery and assembly.

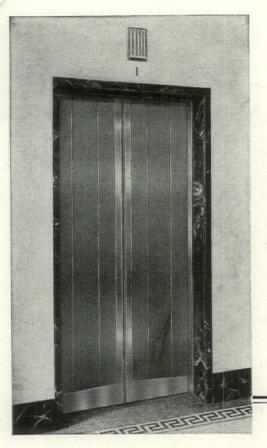
Two systems have been adopted for immediate use though they are considered only as transitory measures leading to the establishment of the ultimate plan: the complete factory production of large cubical sections. Russia's transportation arteries, fewer and much farther apart than our own, are taxed to their capacity with war materials. Even under peacetime conditions, however, they would not be adaptable to the shipment of large prefabricated parts. Prior to the anticipated expansion of the railway and highway networks the initial system for the mass production of housing will entail only the prefabrication of essential structural parts in on-site shops. The second stage will be one of small panels manufactured in plants located at the source of the raw materials. Everything else, however, will be made on the site. As Soviet architects see them, the disadvantages of this system are, less efficient weather-proofing due to the many joints and the fact that most electrical, mechanical and plumbing work must be done on the job where skilled labor is not always available. As for the panels themselves, it has been found that a small size (4 ft. 8 in.), faced with siding, plywood or asbestos cement can be most efficiently and economically produced and that this type also has a wider variety of uses. Mineral wool, celulose wool and felt are the preferred insulation materials. However, widespread use of panel construction is presently hampered by an almost total lack of light insulating materials and for the duration of the war Russia will be forced to use to a great extent such ineffective and costly fillers as sand and slag.

As plant organization and transporta-(Continued on page 178)

One furrow...one faith

No man can be master of all things. He may do many things well . . . even with considerable skill. * But the true craftsman, the gifted creator, the great artist will always be found to have concentrated his genius in a particular field of endeavor. * Back of any lasting work of literature or scientific development . . . behind the painted masterpiece or great industrial accomplishment, there is invariably singleness of purpose . . . unyielding devotion to one goal. * In art and industry . . . in the creative loneliness of vision . . . dedication to a single ideal is the road to achievement. * And when, in addition, that ideal is made into a dynamic, vibrant reality by men of energy and ability . . . the result is human progress. \$\price \text{For more than 40} years, Dr. Willis H. Carrier and his associates have devoted themselves to the art and science of air conditioning and refrigeration. CORPORATION SYRACUSE, NEW YORK

175



WE'LL help you plan the "UPS
and
DOWNS"

In any multiple-story building—office, hospital, school, or other structure—the "Ups and Downs" are an important part of planning. Elevator Entrances by Dahlstrom are part of the vertical transportation systems of outstanding buildings in every state of the union. The combined experience, which Dahlstrom has gained over a period of better than Forty years, is available now.

All those of the building industry who are concerned with elevator problems are invited to consult our technical staffs freely. In this way, considerable gains can be made when building starts. If your data files are not thoroughly up to date on all phases of eleveator

entrance construction, write us—we want to cooperate in every way possible.

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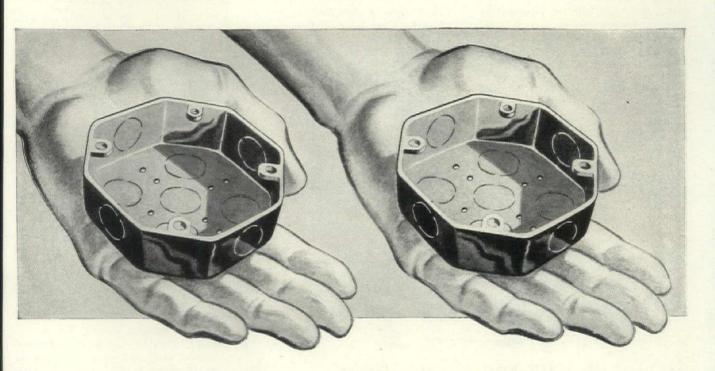
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When your plans call for electrical equipment of standard design, you'll do well to look behind the external similarity of items of a different origin. Installations savings, as well as extra service life, often result from quality factors that don't show up in the "specs".

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PREFABRICATION

(Continued from page 174)

tion facilities improve, larger panels and small house sections will also be manufactured in centrally located plants. While this is the general outline for production, it is not unlikely that minor variations in materials and production methods may be dictated by regional differences.

Staple millwork such as doors, windows and trim will be produced in separate factories set up especially for the purpose. However, the prefabrication plants about to be built or now under construction have carpentry departments which will manufacture clothes closets, storage and kitchen cabinets. Carpentry shops will be equipped with lathe turning and wood cutting machinery for the execution of intricate columns, balustrades, etc.

Partial prefabrication of heating, plumbing, gas and electric systems, gutters, leaders, downspouts and sheet metal ornaments will be done in the mechanical department of the plant. Conveyor belt machinery will be installed wherever practical but will exist without exception in the assembly departments.

A prime coat of paint will be ap-

RIBBON PIECES

RIBBON

SECTION through a two-story house shows one of the preferred Russian systems of panel construction. Heavy exterior skirting and slag insulation are characteristic.

plied to all panels and woodwork at the factory. Structural parts and accessories will be sorted and grouped, ready for unit assembly, before they are stored.

Ornate exterior details will be executed partially in wood (shutters. cornices, etc.) and partially in precast gypsum which permits the use of color. A unique Russian construction feature which seems to have survived modernized building methods is the inevitable plinth, or skirting; a double wall thickness at ground level for added weather protection. Aside from the extra insulation at the joint of the exterior wall and the ground floor, it also encloses a small open space between the grade and the floor joists.

Recent practical experience shows that prefabrication in the USSR is sufficiently developed so that it has and will continue to contribute substantially to the building program. It has been used in connection with the relocation of industries in the Urals and a recent newspaper dispatch tells of a sixteen family house erected in Moscow in 44 hours by the use of prefabricated parts. Its broadest use is, of course, in the reconstruction of devastated areas. In Stalingrad alone several thousand prefabricated dwellings were erected during the year and in most liberated towns they are rising from the ruins. This wide, practical experience gained under war hardship will probably result in a highly developed and strongly established industry in the postwar era.

(Continued on page 182)



Wait till YOU see this latest development in RADIANT HEATING!

As announced previously, Burnham Boiler has something really "hot" on the fire for you! A revolutionary new idea in Radiant Heating which offers striking and sensational advantages over conventional methods and equipment.

How is it different? Why is it revolutionary?

BECAUSE:

It actually makes rooms more comfortable at lower temperatures—saves fuel—provides more healthful living conditions.

It is decoratively desirable—so inconspicuous as to be practically invisible.

It fulfills the engineering ideal of placement "where heat loss is greatest".

And it is 100% practical—easy to install—reasonable in price—and built for life-long, trouble-free service.

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Whether favoring ultra-modern or conservative design, architects and decorators

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RIVER HOUSE APARTMENTS, AT CLEVELAND, OHIO RIVER HOUSE, INC., Owner; SYDNEY N. GALVIN, President; HAROLD GALVIN, Secretary and Treasurer, Cleveland: GARFIELD, HARRIS, ROBINSON & SCHAFER, Architects, Cleveland: HENRY L. PREE, Landscape Architect, Cleveland: GORDON S. GUNDLING, General Contractor, Chicago: LOUIS SPECTOR, Painting Contractor, Cleveland, Ohio.

Apartments are in close proximity to many of Cleveland's West Side war industries, where most of the tenants are employed. The four-acre site overlooks Rocky River Valley. 16 of the 44 apartments have four rooms, while 28 have three rooms each. Well-landscaped, the site has a paved and illuminated parking area for all tenants and an ample and well-equipped play yard.

The buildings have full basements, laundries, drying rooms and bathrooms.

Circulating hot water heat comes from a stoker-operated and thermostatically-controlled plant.

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P&L Paint and Varnish used on this \$250,000 project included P&L Interior Trim Primer, "61" Enamel Undercoating, and Lyt-all, the Universal Wall Coating. "61" Enamel DeLuxe Colors were used on the interior trim to match or harmonize with the wall colors.





... and soon the trend toward **ALUMINUM WINDOWS** will be greater than ever!

In the new architecture of tomorrow aluminum windows will find wider use than ever before. No longer will there be any need to substitute other windows for reasons of cost. Aluminum will be plentiful . . . and General Bronze will be ready with new and better aluminum windows.

You can specify aluminum windows by General Bronze for your new postwar buildings, and know that they will keep your building "modern" looking for years to come. Their neutral color blends harmoniously with most building materials. And these windows have low up-keep features that will appeal to any client-they cannot rot or rust out-they need no paint-they keep working smoothly, efficiently year after year - and they are permanently weather-tight.

Immediately after the war General Bronze will produce new, improved windows in both aluminum and bronze at prices, in standard sizes, that will make them a must for any building. For complete information on General Bronze products, consult Sweet's or write for name of nearest representative.

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FIVE CONSECUTIVE ARMY-NAVY "E" AWARDS



REVOLVING DOORS



ARCHITECTURAL METALWORK



TABLETS

STATUARY





Air Conditioning System a Triumph of Engineering Ingenuity!

Tinsley, McBroom & Higgins, architects; Charles S. Leopold, consulting engineer; and The Pennsylvania Engineering Co. of Philadelphia, contractors for the entire air conditioning system.

Completed in 1940, the Bankers Life Building of Des Moines, Iowa, is a model for postwar planners. It is ultra modern from its structural design right down through to its air conditioning system which is an integral part of the structure.

A unique feature is a wall warming system that works as a complement to the air conditioning and is designed to make every square foot of floor space comfortable and usable.

Refrigeration for cooling water (to condition air for distribution through the perforated ceilings and for circulation through the walls) is handled by three Frick compressors, two 4-cylinder and one 2-cylinder. Each of the 4-cylinder machines is directly connected to its own evaporator and condenser, and the 2-cylinder machine may be used in conjunction

with either evaporator and condenser unit, or the entire plant may operate as a unit. "Freon" refrigerants are used.

Total capacity of the refrigeration plant for summer air conditioning, including reserve, is 650 tons. The air conditioning is completely zoned and each zone is subject to independent thermostatic control—allowing for variations in outside temperature due to sun and prevailing winds.

By making possible greater cleanliness, lower maintenance costs, increased comfort, and more satisfied employees, air conditioning will be one of the essentials in all types of industrial postwar structures. For helpful reference data on "Freon" safe refrigerants write: Kinetic Chemicals, Inc., 10th and Market Sts., Wilmington, Delaware.

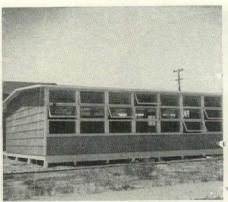
"Freon" safe refrigerants are widely used in heavy-duty refrigeration and air conditioning systems.



PREFABRICATION

(Continued from page 178)







PREFABRICATED SCHOOLHOUSE, a complete unit built by Ernest J. Kump Co., is easily trucked to its erection site.

FLUID



A well worn path travels diagonally across most vacant lots since it is human to seek the shortest route to an objective. Modern store layout permits traffic to flow unhampered by barriers erected perpendicular to the enclosing walls of the structure. Fluid plans demand flexible store equipment; mass-produced under precision methods—as provided exclusively by Grand Rapids.



GRAND RAPIDS STORE EQUIPMENT CO.

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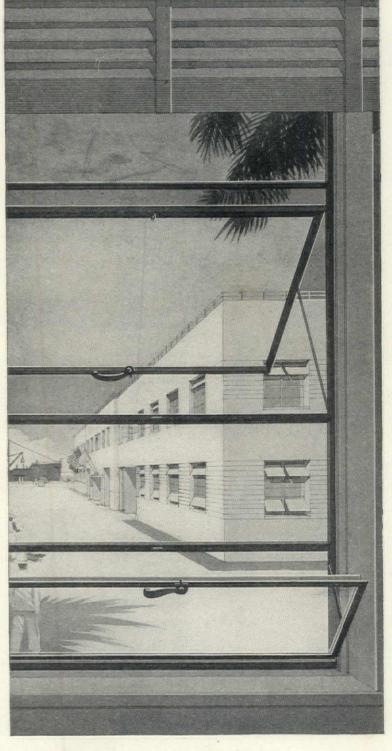
Because of the wartime boom in demountable houses and the vision of expanding postwar markets, many companies without previous experience have leapt to their drawing boards, bobbed up with new designs for low cost demountable homes. Bypassing the attractive house market, Ernest J. Kump Co. has instead applied prefabrication to school buildings, a form of construction in which they are already specialists. Their Pre-Bilt school is the outcome of years of work with conventional school design and construction and represents a real innovation in building.

The new development is a "packaged" class room unit complete in itself, but designed for combination with any num ber of similar units to produce the de sired size of school. Manufactured in the Standard Engineering Corporation Plant at Sacramento, Calif., these class rooms are prefabricated to the last de tail. The components of each unit are loaded at the plant onto a special trailer truck which hauls them to the school site. There the entire package is lifted off and set down on the ground ready for erection. A specially designed service truck containing the tools and supplies needed for assembly, accompanies the demounted classroom to the site. Through use of these special tools, erection can be completed in a few days.

Several of these packaged school projects are already underway in California. A large one consisting of eighteen units has been completed for the Alameda City Schools at the Webster and Estuary War Housing Projects in Alameda. The greatest possibilities, however, lie in postwar rebuilding.

A British building mission which visited San Francisco several months ago evinced interest in the Kump design. In addition indications have been received that the French Government might use the prefabricated school in the transition period preceding permanent rebuilding. Postwar plans in both Britain and France, therefore, suggest an excellent market for the new school, in addition to its promising American future.

Building for Puerto Rico Steamship Company. Frederick Snare Corp., Architects and Contractors.



Office space, equipped with Lupton Metal Windows and screens, receives increased fire protection as well as complete ventilation with easy operation. For over forty years, Lupton Metal Windows have represented the most modern in metal window design and construction. Engineered to supply abundant daylighting, unhampered view and controlled natural ventilation, Lupton Metal Windows offer improved working conditions for office or industrial buildings.

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LUPTON METAL WINDOWS

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MANY STRUCTURES OF THE 194X PERIOD NOW DOT THE AMERICAN SCENE

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Central Public Library, Brooklyn, N. Y., Githens & Keally, Architects; Alberene Black Serpentine Spandrels.

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U. S. Dept. of Agriculture, Regional Research Laboratory Building, Wyndmoor, Pa., Alberene Tremolite Mullions.

RETAIL STORE



Cord Building, Beverly Hills, Calif., Burton L. Schutt, Architect; Alberene Black Serpentine Facing and Bulk-

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Branch Building, Queensborough Gas & Electric Co., Valley Stream, N. Y., Voorhees, Walker, Foley & Smith, Architects; Alberene Black Serpentine Facing and Bulkleads

HOSPITAL



U. S. Naval Hospital, Bethesda, Maryland; Navy Dept., Architects; P. P. Cret, Consulting Architect; Alberene Black Serpentine Panels.

SCHOOL



Public School No. 114, Bronx, N. Y., Eric Kebbon, Architect; Alberene Black Serpentine Paneling.

This advertisement, published as a tribute to the far-sighted designers of pre-Pearl Harbor days, was prompted by Architectural Forum's impressive May issue which featured "New Buildings for 194X" by prominent architects.

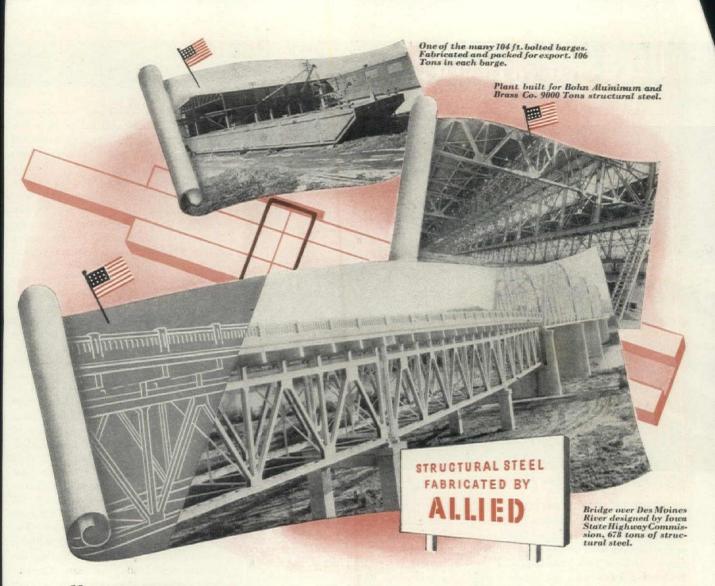
In the main the facades call for panels or slab treatment in contrasting tones. Alberene *Dark Stones* meet the demand for permanent exterior

stones...economical because they can be supplied as thin as 7/8". Alberene Stone Corporation of Virginia, 419-4th Ave., New York 16, N. Y., Quarries and Mills, Schuyler, Va.

"Start an architect BLACK SERPE

PERMANENT, NON-REFLECTIVE, ECONOMICAL

on a plan now"..._



"ALLIED cooperates with our Architects and Engineers on our structural fabrication plans and specs"...

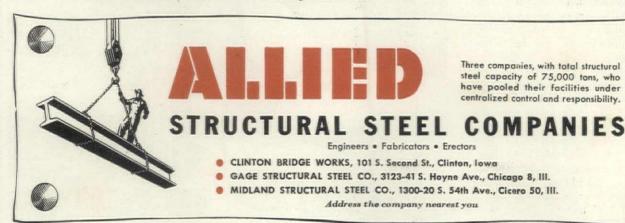
Intensive study for a quarter century in the language of blueprints enables Allied engineers and layout men to interpret and create structural steel in close harmony with architects, engineers, contractors, and erectors... everywhere.

When this engineering ability coordi-

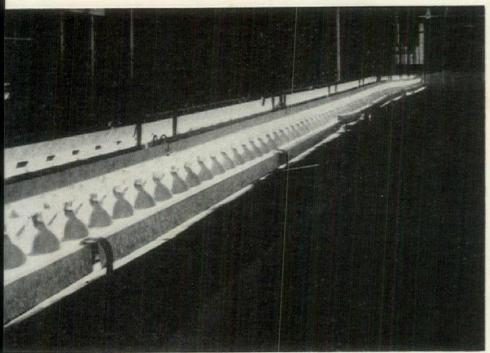
nates with the mass-tonnage resources of the companies' plants, the name "Allied" becomes synonymous with precision fabrication and rapid production.

Put the Allied name on your list to quote on your fabricated structural steel requirements.





BUILDING REPORTER



TESTING THE PERFORMANCE OF COPPER GUTTERS UNDER HEAT AND COLD

RESEARCH ON COPPER GUTTERS to develop specific design data has been conducted by Revere Copper and Brass Inc. in conjunction with the Div. of Architecture of the New York State Dept. of Public Works. A few years ago, copper roofing and gutter installations failed on several monumental buildings, and general opinion blamed expansion and contraction or shoddy installation - everhandy excuses for any copper problem. Revere's research department, however, believed that satisfactory performance could be assured once sheet metal constructions were reduced to a matter of engineering design, and these principles made available to sheet metal workers. Therefore, the aim of their research was to understand and evaluate the design factors, and to determine exact specifications for different installations. Tests were conducted with box-gutters, and a partial report of the experiments just released states "that while some of the faulty installations were due to bad workmanship, most of them could be attributed to the use of the incorrect gauge and temper of the copper to do the job." Experiments consisted of substituting duplicates of the faulty guttering to successive hot and cold cycles with a temperature range of between 150° and 160°. Heat was produced by 250 w. heating lamps, and the cycle was completed with a water sprinkling system. The heating lamps were installed in such a way that 374 of them projected their waves on a 65 ft. gutter section at one

time. Gutters were washed in a sodium hydroxide solution so that they would absorb enough heat to make the pronounced temperature change necessary. Many tests were conducted, but not until stiffening members were installed were any gutters able to stand up under 500 cycles. The use of a heavier metal for monumental construction was also indicated as a result of these tests. This confirmed a survey of faulty gutters on ten state buildings which showed that six had failed because of inadequate column strength. Findings of these tests are soon to be published in a specification manual by Revere for architects and sheet metal workers.

CONCRETE PLANKS constructed by a new method of joining lightweight insulated blocks into any desired lengths, form wide-span concrete floors and roofs. This system, developed by the Cities Fuel and Supply Co. of West Allis, Wis. consists basically of special concrete masonry units of lightweight aggregate having designated spaces for reinforcing rods. The edges of the special hollow blocks are dipped in cement and laid face to face, bottom side up, for any desired length. The blocks are aligned on any solid surface using pipes in the grooves for the reinforcing rods and a tie rod in the central core. Reinforcing rods are laid in the 2 grooves and cement is poured over the rods. During the grouting, the rods are twisted to insure a good bond. The planks are cured 10 days, and shipped to the job where they are hoisted into place. Planks made with the 4 in. units were tested for a 10 ft. clear span. They gave an equivalent uniform load of 133 lbs. per sq. ft. when the deflection became 1/360 of the span. The ultimate loads came at an equivalent uniform load of approximately 330 lb. per sq. ft., yield point and ultimate failure coming at the same load. The 6 in. units gave an equivalent uniform load of 215 lb. per sq. ft. when the deflection was 1/360 of the span. The ultimate load came at an equivalent uniform load of approximately 550 lbs. per sq. ft., yield point and ultimate failure coming at the same load. Recent tests on a 14 ft. clear span showed an average deflection of .67 in. carrying a weight of more than 7 tons. (Continued on page 188)

concrete PLANKS are made from insulating blocks dipped in cement and laid face to face. They are pulled together by central tie rods and reinforced with piping.





Air-Conditioned Music

The air-conditioning system in the home of tomorrow could be designed to bring radio programs as well as fresh air into every room. Unquestionably we will shortly see many other new things that will make living more comfortable-more leisurely-more pleasurable. We will see a wider use of aluminum and magnesium alloys in the products we use daily. For more than 25 years the Bohn organization has specialized in engineering these light alloys that are now attaining such wide acceptance. When the time comes, we will be glad to help solve manufacturing and selling problems for those to whom these light alloys can supply the all-important answer.

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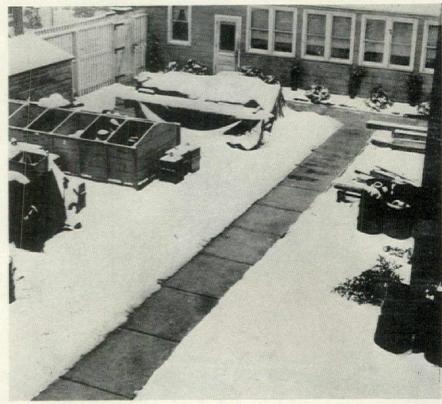
BUY WAR BONDS



(Continued from page 186)

RADIANT HEATING which has been used successfully in homes, schools, churches, offices and factory buildings, is now being installed outside to keep foot-paths and driveways free of snow and ice. Two factory plants in the East have taken advantage of this unique outdoor application and have proved its feasibility. The Sarco Manufacturing Co. at Bethlehem, Pa. embedded wrought iron pipes in a concrete foot-path where employes had to walk out of doors from the plant to the cafeteria. With this system hot water was circulated through the pipes, thus melting snow as it fell and preventing the formation of ice. The Hewitt Rubber Co. at Buffalo, N. Y. laid wrought iron pipe coils, 80 ft. by 8 ft., under a truck driveway. Low pressure steam from the company's boiler was the heating medium. Installation of these systems has completely eliminated the shoveling of snow and the chopping of ice and prevented the danger of slipping and skidding in winter weather. Installation expense varies according to local conditions, but the cost of outdoor heating is balanced against the saving in labor and the increased safety which it provides.

(New Products appear on page 190)



RADIANTLY HEATED WALK DE-ICES ITSELF, ELIMINATES SNOW SHOVELING

The Importance of an Education Underfoot

Architects appreciate the importance of getting the basic facts about school flooring because school floors take more punishment, year in and year out, than any other part of a school building.

Millions of square feet of Tile-Tex have been specified and installed in school buildings in the past twenty years. Millions of square feet of school flooring will be specified for use in post-war schools. Many architects will specify Tile-Tex Asphalt Tile because they know it's got what a school floor has to have in order to perform properly.

Tile-Tex floors are slip-safe—they're easy to clean and keep clean—they have an exceptionally long life—they're highly fire-resistant—they fit lean budgets because they're low in first cost—and, in addition, they're attractive in appearance.

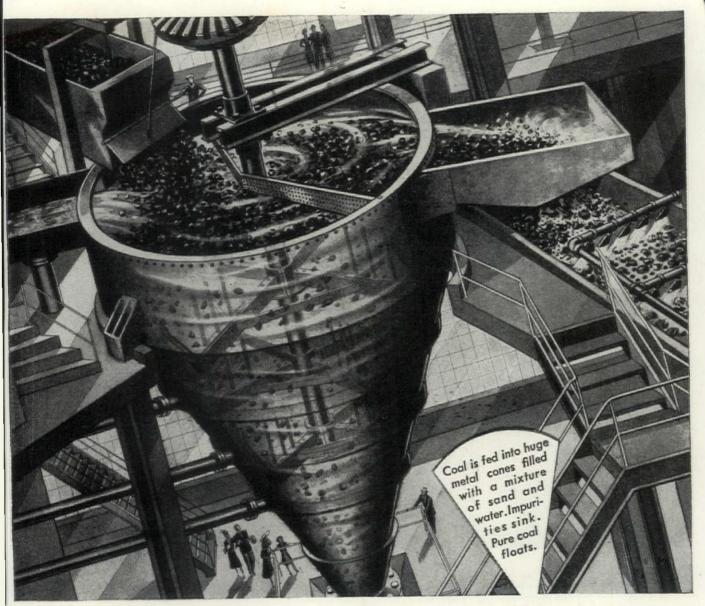
Tile-Tex will be a better floor for schools than ever before, after the war, due to constant research. Specify it now for the



Corridor: Cornell Medical College, New York City

schools you are planning and if we can help you in any way let us know.

The TILE-TEX Company CHICAGO HEIGHTS, ILLINOIS



What's this ... A PROJECTION OF THINGS TO COME?

It's one of the machines which Cone-Clean D & H Anthracite. Modern methods of preparation like this make this time-tested fuel the most modern fuel. Great Things to Come can be expected from Anthracite and Anthracite-burning equipment. Specify it in your plans for post-war homes. We welcome inquiries from architects.

- HEALTHFUL: Anthracite provides constant, even heat—temperature is not constantly fluctuating between hot and cold "on" and "off" periods.
- ✓ CLEAN: Since Anthracite contains but a negligible amount of hydrocarbon, it burns with absolutely no smoke or soot. Walls, curtains stay clean!
- **ECONOMICAL**: D & H Anthracite is especially economical, because of its high heat content. It provides more heat from less fuel and saves money.
- CONVENIENT: Heat Regulators, stokers, etc., make the use of Anthracite as automatic, effortless as possible with any fuel. Amazing advances ahead!

The HUDSON Coal Company SCRANTON PENNSYLVANIA

PRODUCERS OF D&H ANTHRACITE THE FUEL OF THE FUTURE



TUNE IN "SUNDAY MORNING WORLD NEWS" 9 A. M. EVERY SUNDAY, CBS

BUILDING REPORTER

(Continued from page 188)

SPRAY PUMPS can apply wide variety of materials.

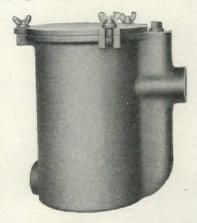
Name: Versatal Pumps.

Features: Versatal Pumps, which have been successfully used by the U.S. Navy, utilize compressed air to apply a wide variety of materials including paints, lacquer, mastic, sealers, insulating materials, fibre and cement coatings, and caulking compounds. From one to six operators can work simultaneously from a single pump, using different spray handles and material lines. It is claimed

that material is delivered from the pump at pressures 41/2 to 51/2 times the air pressure introduced to the pump. Reloading of the material container can take place without interruption of operations as the pump eliminates the necessity of maintaining an air head in the container. An automatic agitator maintains an even material mixture without the aid of mechanical devices, and both heavy and light materials can be handled under extremes of heat or cold. Versatal pumps are available in several types and sizes. Stationary barrel pump models are designed to fit over the top of a standard 54 gal. barrel. One type is recommended for the handling of heavy or

viscous materials, another for the handling of fluid materials. There are also portable models which come with an attached 12 gal. material container. Operations of these pumps have included the spraying of paint on housing projects, of fibre coating on oil storage tanks and pipe lines, of antirust paint on bridges and structural steel and spraying of oil and graphite onto roofs, and painting harrels.

Manufacturer: Alemite Div., Stewart-Warner Corp., 1826 Diversey Pkwy., Chicago 14, Ill.



GREASE INTERCEPTOR at economical price.

Name: Stop-All.

Features: This efficient low cost interceptor, which prevents clogged drain pipes by catching grease and fats is designed for home use and other applications in which requirements are not excessive. The "Stop-All" is durably constructed of cast iron, with baffles cast in place. Large 11/2 in. tapped openings make installation simple and wing nuts on the cover permit easy cleaning. The unit is 10 9/16 in. over-all height, 87/8 in. wide and measures 11% in. between tapped openings. The low cost of the unit, list price \$14.00, has been achieved by standardization of one simple design, and large scale production. Finished in gray. Shipping weight 30 lbs.

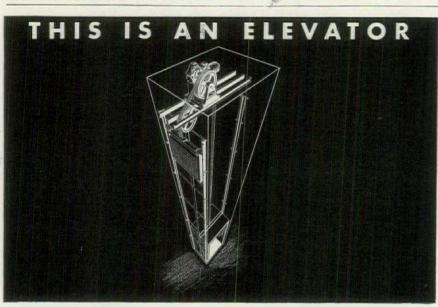
Manufacturer: Wade Mfg. Co., Elgin, Ill.

FLAME-PROOF PAINT for extremely hot surfaces.

Name: Blaze-Pruf Silver-Lume.

Features: This brilliant metal protective paint is made of non-inflammable pigments and of vehicles which are non-inflammable either in the can or when applied. Blaze-Pruf Silver-Lume is a good protection for all types of metal surfaces, since it will stand heat up to 1800° F. and in addition is a good rust preventive. It is particularly suitable as a fire protective coating on metal surfaces in oil refineries, explosive plants, and wherever non-inflammable paint is desired. It can be applied to cold metal or to hot metal surfaces without the necessity of cooling. This paint can be

(Continued on page 194)



LOOK AT an elevator from the outside and all you see is the box-like car. It appears a simple gadget. But above and below the car—and attached to it—is the real elevator.

The car of a Sedgwick Electric Freight Elevator, for example, consists of a structural steel frame or sling to which traction steel hoist ropes are attached—a steel-framed platform with a hardwood-over-sheet-steel floor—and a sheet steel enclosure with a wire mesh or perforated sheet steel top.

SEDGWICK SAFETY FEATURES

At the top of the hoistway is a worm geared V-groove traction machine with internal spur gearing—special steel gear and sheave shafts with anti-friction bearings—and an electromagnetic brake to stop the car if the current is interrupted from any cause.

A centrifugal speed governor operates the car safety which brings the car to a complete stop should it descend at excessive speed or should the cables break.

SELF-ALIGNING MOTOR CUTS COSTS AND SIMPLIFIES INSTALLATION

An efficient single speed, reversible type motor, especially designed for heavy duty service, provides the power to operate the elevator. Its high starting torque and low starting current help cut operating costs. And the self-aligning mounting facilitates installation.

MADE IN ANY SIZE TO LIFT ANY LOAD

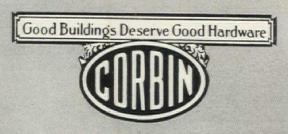
Sedgwick makes five standard freight elevators with capacities ranging from 2500 lbs. to 8000 lbs. But Sedgwick designs and manufactures elevators to lift any load. There is no limit to the weight lifting capacity of a Sedgwick elevator. Fact is, today, on many aircraft carriers, fighting planes are lifted from hangar deck to flight deck on Sedgwick airplane elevators — capacities 85,000 lbs. and more.

If you are planning the modernization, reconversion and new installation of elevators and dumb waiters—if you are confronted by perplexing lifting and lowering problems tell us about them. Our engineering staff is at your service now ready to help and show you how Sedgwick elevators and dumb waiters reduce costs by making the vertical movement of men, material and merchandise safer, surer, more economical.

And we would like to reserve your copy of our new booklet "Standard Specifications for Sedgwick Elevators and Dumb Waiters." Write on your company letterhead—tell us how many you want—and we will make certain you receive your copy or copies as soon as they come off the press.

SEDGWICK MACHINE WORKS, INC. 140 WEST 15th STREET, NEW YORK 11, N.Y.

ELEVATORS . DUMB WAITERS . ROTO WAITERS . SPECIAL LIFTS



Our production is restricted but our imagination has Free Rein

• If you have one or many projects . . . schools, colleges, hospitals, theatres, stores, factories, public buildings, residences . . . on your V-day calendar and want these jobs to move quickly when construction starts, we suggest that you invite us to "sit in" with you now. Corbin builders'

hardware specialists are abreast of modern trends and their helpful counsel can take much of the detail load off your shoulders.

"Good Buildings Deserve Good Hardware" post-war, as always. And, as always, you may rely on Corbin to supply it.

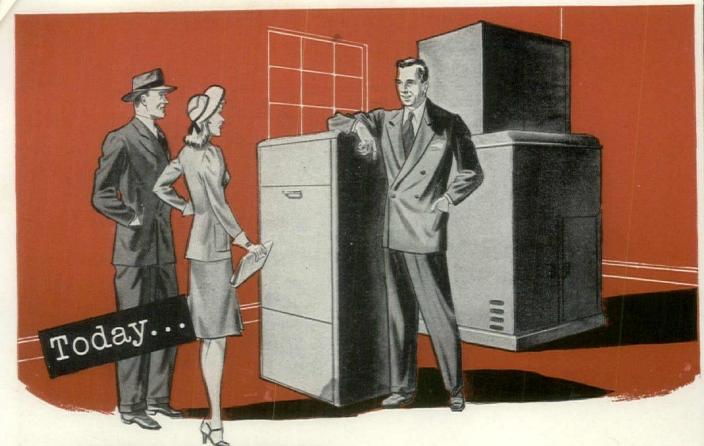


P. & F. Corbin

THE AMERICAN HARDWARE CORPORATION, SUCCESSOR

NEW BRITAIN, CONNECTICUT · SINCE 1849

FEBRUARY 1945



COMPACTNESS

means more for the customer's dollar

REMEMBER when furnace values were measured by the size of the unit? Today, modern research and engineering have completely changed that concept... have shown how the application of new materials, and new design can make for greater compactness and higher heating efficiency in smaller units.

For instance — Janitrol's Multi-Thermex tubes, combined with Amplifire ribbon-type burners.

With these two unique Janitrol developments, bulky combustion chambers are eliminated. Short, hot, uniform flames are burned directly within the heat exchanger tubes. Heat is more quickly transferred to the circulating air chamber.

Results?

First, overall smaller size saves materials, permitting the use of more expensive alloys in certain critical parts for more rapid transfer of heat.

Secondly, the design and construction of Multi-Thermex tubes means quicker response to thermostatic control. Less lag when heat is needed. Quicker cooling to prevent costly and uncomfortable overheating.

Third, smaller size of Janitrol makes possible factory assembling of heater, quicker, easier, less costly installation, and more usable space in the basement or utility room.

So, when you specify a Janitrol FAC Winter Air Conditioner, you're specifying less furnace by weight and volume—but more heating economy and long lasting liveability than is possible with conventional forced air furnaces. Write today for information and data on the complete line of Janitrol Gas-Fired Heating Equipment. Surface Combustion, Toledo 1, Ohio.





THIS completely modern system enables any hospital to give patients better care by registering their needs quickly, and permitting constant, automatic night supervision through sensitive microphone pick-up.

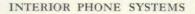
It greatly increases hospital efficiency too, by reducing unnecessary trips to the bedside, and enabling nurses to use nurses' aides or orderlies for routine errands. The practical result is to enable one nurse to do the work of two, with less fatigue.



DOCTORS' CALL SYSTEMS

A system for indicating at central positions which staff members are in the building is essential in every well-equipped, efficient hospital. "Connecticut" systems

are adaptable to hospitals of all sizes, and can be arranged to meet any conditions.



Special systems to serve diet kitchens, nurses' homes and other specialized purposes, are an important planning consideration. Such circuits provide faster com-

munication, privacy where required, and remove a heavy load on central switchboard.



ARCHITECTS AND HOSPITAL EXECUTIVES

Use "Connecticut's" Advisory Planning Service. A good first step is to write for Bulletin No. 102, a valuable reference book on Hospital Signal Systems.







CONNECTICUT TELEPHONE & ELECTRIC DIVISION

GREAT AMERICAN INDUSTRIES, INC., MERIDEN, CONNECTICUT

EBRUARY 1945

BUILDING REPORTER

(Continued from page 190)

used over an already corroded surface as it penetrates rusted pits and pin-holes and seals against further action. It is also applicable to wood to retard fire hazard.

Manufacturer: The Wilbur & Williams Co., Park Sq. Bldg., Boston 16, Mass.

DEHUMIDIFIER embodies new design and operation features.

Name: Water-Sorber.

Features: According to its manufacturer the Water-Sorber is designed in such a

way that it can draw more moisture from the air per lb. of chemical than other devices previously marketed for this service. New features included terraced construction, which provides three receptacles arranged one below the other to catch residue liquid in descending stages. Thus the liquid, which does not entirely loose its active chemical by dissolving from solid form, continues to absorb moisture. Surfaces of the chemical cubes used are exposed for greater absorption area and perforations in the bottom of the tube container allow air to enter, increasing moisture absorption. A single unit will service from 800 to 1,000 cu. ft. It can be used effectively for drying air in warehouses, tool rooms, clothes closets, basements, and other confined spaces, preventing harmful dampness, mold and mildew. The unit is shipped inside an air-tight container, and can be set up ready for use in a few seconds. Retail price, including 10 lbs. of chemical cubes is \$4.50. Extra cubes are available at \$1.40 per 10 lb. can.

Manufacturer: The General Air Conditioning Co., Dept. C, Cincinnati 9, Ohio.

CRANE-TRUCK COMBINATION has wide material handling range.

Name: Model L-11C Combination Crane Truck.

Features: This combination crane truck has improved operating performance by the addition of a separate motor for raising and lowering the boom. Separation of these two functions offers the operator a greater freedom of choice in manipulating the load. The new machine is a combination truck, serving four different purposes-lift-truck, load carrier, crane and tractor. It loads itself either by picking up skid loads with the lift platform, or by lifting heavy parts and placing them on the platform for transport. As a tractor it pulls trailer cars which may be loaded by means of the crane. The crane may also be used for heavy lifting at spots where there is no overhead crane. This model has a capacity of 6,000 lbs. on the platform, 2,000 lbs. on the hook at 42 in. radius and 1,000 lbs. on the hook at 84 in. radius. Its speed is 6 m.p.h. unloaded, and 5 m.p.h. with full load under normal conditions. The platform is deeply flanged to insure rigidity and has threepoint support to insure load stability. Manufacturer: Elwell Parker Electric

Manufacturer: Elwell Parker Electric Co., 4205 St. Clair Ave., Cleveland 14, O.

FLUORESCENT LAMP, the size of a marble. Features: A new type of fluorescent glow lamp, as small as a marble, has been developed which puts out continuously more light than a ¼ w. neon lamp. It has an energy input that adds up to less than 1 kwh. in a year's continuous burning, and, at average domestic power

(Continued on page 198)



heels in war work and our metal cabinets will

to a Lawson metal cabinet is a Lawson Warwood cabinet. These we are turning out in

large quantities. And we really are proud of

our Warwoods. For full information write to

The F. H. Lawson Company, Cincinnati 4,

Ohio. We'll guarantee you the finest non-

THE F. H. LAWSON COMPANY

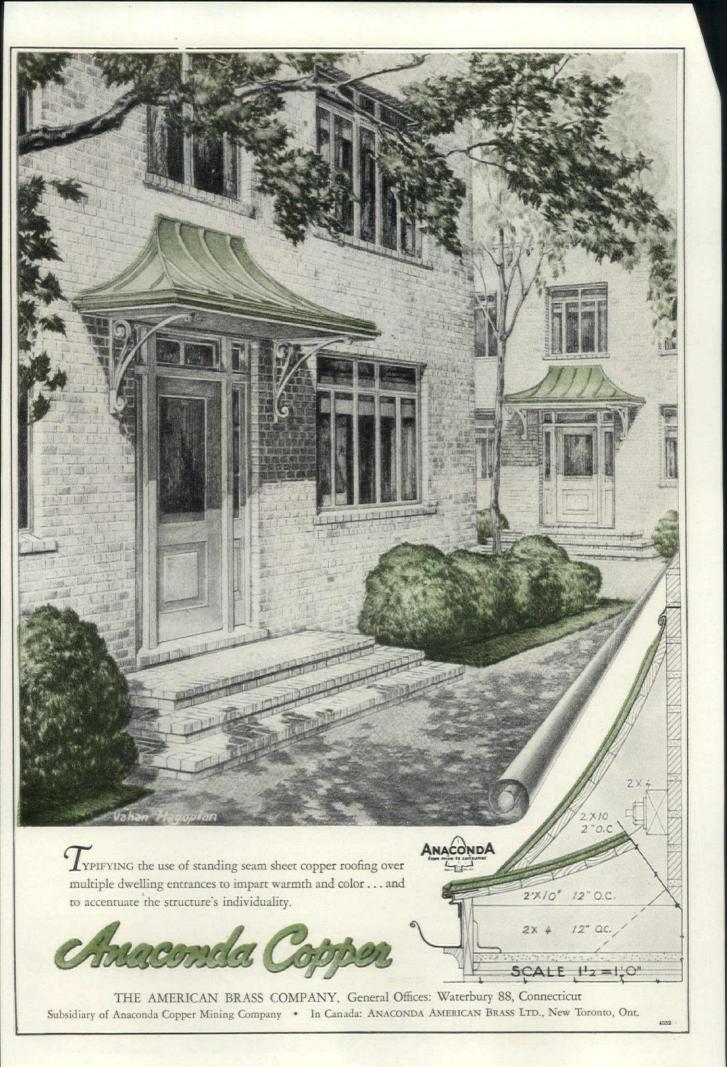
CINCINNATI 4, OHIO

metal cabinet on the market today.

We will say, though, that the next best thing

194

have to wait.





• Hotels, hospitals, apartments, and office buildings — all are designed today to minimize sound. . . . But what price sound-proofing walls and ceilings, when doors largely nullify the investment?

RODDISCRAFT Solid-Core Flush Veneer Doors combat sound in three ways -

- 1—They defeat the passage of sound with a solid softwood core overlaid with crossbanding and face veneer five thicknesses of wood which absorb sound and offer high resistance to its passage.
- 2—Soundless closing and opening without binding is characteristic of the RODDISCRAFT door because RODDISCRAFT construction permanently seals out moisture which results in warping and swelling.
- 3—The Solid Core, welded to the cross band veneer, eliminates the "drumming" inherent in doors of hollow-core construction.

Roddis backs all doors made according to its standard construction, with a two-year Guarantee Bond, unqualifiedly guaranteeing materials and workmanship — and the redwhite-and-blue dowel, permanently identifying the door as RODDISCRAFT — two exclusive Roddis features.



FROM TIMBER TRACT TO BUILDING SITEPt's Roddie all the Way!



Roddiscraft

WAREHOUSES

CAMBRIDGE 39, MASS., 229 Vassar St.
CHICAGO 8, ILL., 1440 W. Cermak Rd.
CINCINNATI 2, OHIO, 457 E. Sixth St.
DALLAS, TEXAS, 2615 Latimer St.
KANSAS CITY 8, MISSOURI, 2729 Southwest Blvd.
LOUISVILLE 10, KENTUCKY, 1201-5 S. 15th St.
LONG ISLAND CITY, N. Y., Review and
Greenpoint Ave.

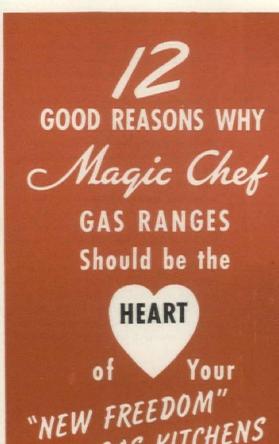
MARKHEIELD, WISCONISIN.

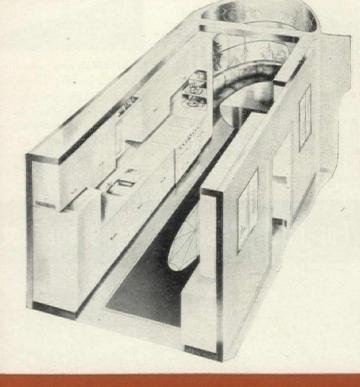
MARSHFIELD, WISCONSIN
MILWAUKEE 8, WIS., 4601 W. State St.
NEW YORK CITY 18, NEW YORK, 515 W. 36th St.
SAN ANTONIO, TEXAS, 727 N. Cherry St.
DEALERS IN ALL PRINCIPAL CITIES

See Sweet's Architectural File for complete door line and specifications

Koddiscraft

Roddis Lumber & Veneer Co.





Twhical example of a New Freedom was kitchen with a Maric Chel Range

The New Freedom gas kitchen will be a powerful factor in selling postwar homes, and the famous nationally advertised Magic Chef is the ideal range for you to specify. Here are 12 good reasons why postwar home buyers will be attracted to homes with Magic Chefs in their kitchens.



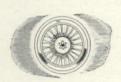
Automatic Oven Cooking! Simply set clock and temperature control. Gas turns on and off automati-cally; cooks a whole meal while you are away.



2 Red Wheel Oven Heat Regulator! Accurate control of oven temperatures at all times. Just set regulator—better baking and roasting assured.



3 Automatic Lighting! All burners light automatically on your C.P. Magic Chef. No matches—just turn on the gas and the burner lights.



Even Heat! Magic Chef top burners are designed for perfect top burner cooking. Special Simmer Control for "waterless" cooking.



5 Swing-Out Broiler! Makes broiling easy-prevents smoking and food catching fire. Really easy to clean.



Convenient Work Top! The top of your Magic Chef is a convenient working surface for use when either preparing or serving foods.



7 Look for "C.P." seal of approval. Trade-mark of A.G.A. and E.M.

8 Non-Clog Burners!

9 Magic Insulation!

10 Cross-Fire Oven Burner!

11 Easy Cleaning!

12 Porcelain Finish!

STATE

AMERICAN STOVE COMPANY

GAS KITCHENS

4901 Perkins Avenue • Cleveland, Ohio

NEW YORK . PHILADELPHIA . CLEVELAND . CHICAGO ST. LOUIS . ATLANTA . LOS ANGELES



FOR FURTHER DETAILS USE THIS COUPON

AMERICAN STOVE COMPANY, 4901 Perkins Avenue, Cleveland, Ohio Please send me the A.I.A. descriptive sheet on Magic Chef Gas Ranges available after the war for postwar kitchens. (If complete catalog is desired, check here [].)

NAME

FIRM

ADDRESS

CITY

BUILDING REPORTER

(Continued from page 194)

rates, should consume less than 3 cents worth of energy annually. Discharge takes place in a rare gas and the resulting radiation is converted by phosphors on the inner walls of the bulb into a soft glow. A tiny resistance in the miniature screw serves as ballast. The green glow lamp is ideally suited as a night light in bathrooms and halls, and will be available for such use after the war.

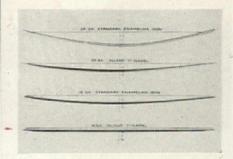
Manufacturer: Westinghouse Electric & Mfg. Co., 306 4th Ave., P. O. Box 1017, Pittsburgh 30, Pa.



ALLOY STEEL with enameling properties. Name: Inland Ti-Namel Steel.

Features: This new vitreous enameling alloy steel is claimed by its manufacturer to have solved the problem of applying white or light pastel cover coat vitreous enamels directly to steel surfaces without the prior application of a base or ground coat enamel. The new

alloy steel reduces enamel shop reoperation, edging and scrap. It permits a lower temperature and shorter time for firing, thus increasing shop output and lowering over-all enameling costs. Formerly when enamels were applied directly to standard enameling stock without a ground coat, finishes contained black specks, enamel pits and blisters, the result of gases caused by a reaction of carbon in the base metal with certain constituents in the enamel at firing temperature. Research has found that titanium added in a quantity dependent upon the amount of carbon in the base of the metal, eliminates the cause for pitting, black specking and blistering. Inland Ti-Namel has been made on this principle and its drawing properties are indicated to be equal to the best deep drawing iron and steel sheets. Thus the new alloy will permit drawing of many parts formerly formed and welded. It is said to have superior resistance to sagging,



which means that truer shaped (enameled) ware can be manufactured or lighter gauges can be used. Satisfactory white enamel finishes can be obtained with a thickness of from .006 in. to .009 in. These thin coats have high reflectance and the advantage of reducing the chipping hazard.

Manufacturer: Inland Steel Co., 38 So. Dearborn St., Chicago 3, Ill.

STEEL WALL DESKS again available.

Features: Steel wall desks, especially suitable for inspectors, timekeepers and checkers, are again available. These desks, finished in green baked enamel, can be attached to any convenient wall space, building column or to the end of shelving racks. They feature large working surfaces, ample storage and open compartments.

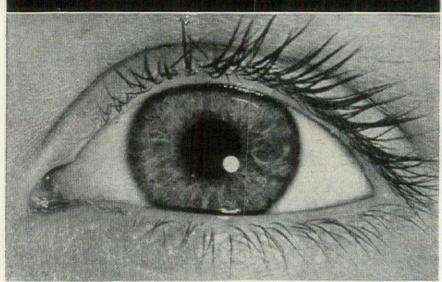
Manufacturer: Lyon Metal Products, Inc., Aurora, Ill.

TEST CLAMPS for making temporary connections.

Features: This new test clamp line which employs tremendous jack-screw gripping action, is recommended for making heavy duty temporary connections for motor and meter testing, battery charging, welding, and many other

(Continued on page 202)

For floors that help eyes see better



- Specify LIGHT-REFLECTING CONCRETE FLOORS MADE WITH ATLAS WHITE CEMENT

Many industrial plants throughout the country credit faster, more efficient production to improved illumination. One aid to better seeing is light-colored concrete floors made with Atlas White cement instead of normal gray cement. Such floors act as giant reflectors and distributors of light. This reduces brightness contrast, eye strain and fatigue and helps to lessen accidents, errors, spoilage and shutdown of machines.

Lighting tests in one of Consolidated Aircraft's large plants show that a white-cement floor reflected 61% more light to working sur-

faces than did a gray-cement floor.

Light-reflecting floors, made with Atlas White cement, are as adaptable to modernization or conversion as they are to new construction. You'll value a copy of the book, "Light From Floors." It tells the full story. Write to Atlas White Bureau, Universal Atlas Cement Company (United States Steel Corporation Subsidiary), Chrysler Building, New York 17, N. Y.

HOW ABOUT MAINTENANCE

Experience shows white-cement floors are easy to clean, easy to keep clean, and retain their reflection advantage. Maintenance is simple—frequent sweeping, occasional damp mopping, periodic scrubbing.

AF-F-31

ATLAS WHITE CEMENT

For Light-Reflecting Floors



How the BENDIX has become an integral part of Modern Home Equipment



That the Bendix Automatic Home Laundry has revolutionized modern home planning and architecture, is a well-established fact. The Bendix is not limited to basement installations—but is practical and beautiful in kitchen, playroom, bathroom or utility room, as well!

It blends with the electric kitchen, for instance—as sleek and white as the finest range or refrigerator. Takes only 4 square feet of floor space.

Needs no set-tubs. Completely automatic. Helps sell the house. Available in many states for FHA financing. Have *your* Bendix plans ready to meet the demand that's on the way! Ask your Bendix distributor for full information. His name is in the classified section of your phone book.

BENDIX De Luxe Model: 26" wide, 36" high (control panel back board at rear). 38" high from floor, 22¾" deep.

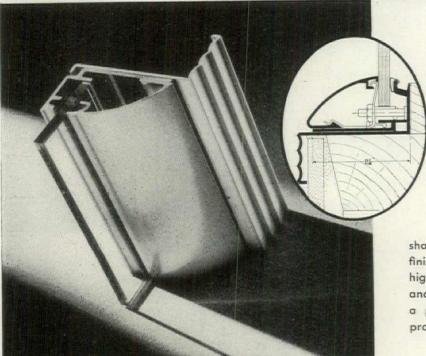
BENDIX Standard Model: 25 1/4" wide, 35" high, 22 3/4 deep.

BENDIX automatic Home Laundry

BENDIX HOME APPLIANCES, Inc., South Bend, Indiana, Pioneers and Perfectors of the Automatic "Washer"

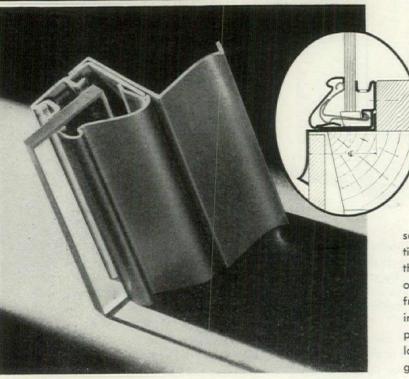
For BEAUTY...use Pittco Metal

YOUR CHOICE OF TWO OUTSTANDING LINES



DITTCO Imaginative styling and planned harmony between members are two factors which help to account for the continued popularity of De Luxe Store Front Metal. Pittco De Luxe offers the architect a wide choice of distinctive pieces with which to create sales-winning store fronts. The extruded process of manufacture assures clean,

sharp profiles, sturdy strength, perfect color and finish. Pittco De Luxe is intended primarily for high quality work. In the varied bars, mouldings and sash of the De Luxe line, the architect has a pleasing and impressive solution to many problems of modern store front design.



PITTCO A high degree of architec-tural symmetry is one distinguishing mark of the new Pittco Premier line of store front metal, Like Pittco De Luxe, Pittco Premier was designed as a unit ... each piece styled to complement and heighten the beauty of the other members with which it may be used. Pittco Premier construction can be set more quickly and easily, with greater

safety to the glass than other metal constructions. The sash is self-adjusting to various glass thicknesses, yet always maintains a firm grip on the glass. All setting operations are done from the outside and effect a substantial savings in setting time. Pittco Premier is moderately priced, is light in weight, and provides a shallower reveal for show windows than its distinguished companion line.



PITTCO STORE FRONT METAL
PITTSBURGH PLATE GLASS COMPANY

"PITTS BURGH" stands for Quality Glass and Paint

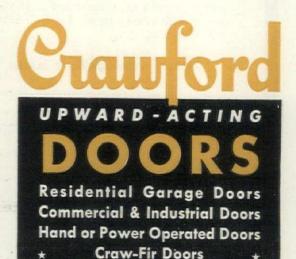


BETWEEN the lines of the unfolding story of this war it isn't difficult to read the story of aviation coming of age. The postwar world—with thousands trained to handle planes and new hundreds of thousands accustomed to travelling in planes—will indeed be an air world.

Thousands of new hangars, public and private, will dot the land—and, though we have been up to our ears in the battle of production for war, we have been thinking of Crawford Door applications for hangars.

It is not too early for you to be thinking about this same subject. We have some unusual slants on efficiency and economy—quite naturally, too, since we have worked so long with similar problems for residential garage and industrial applications. We understand hangar door requirements, but you won't find our minds closed to special considerations you may present. Can we be of help to you? Just drop us a line—there's no obligation.

Crawford Door Company, 401 St. Jean, Detroit 14, Mich.



BUILDING REPORTER

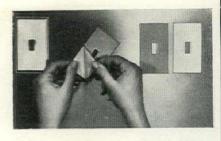
(Continued from page 198)

shop and laboratory purposes. A slight twist of the large safety knob exerts great pressure which prevents the clamp from slipping or "jumping off" once it is attached. The pressure accounts for the large carrying capacity on both constant and intermittent duty. Generous size lugs provide quick connections without the use of special tools or the necessity of cutting into the wire. Swivelling completely around the knob, the lugs permit easy installation and allow wires to hang

in a natural position. Available with both solderless and solder lugs, the clamps come in six sizes to fit across ferrule and knife blade fuse clips, switch blades, round or flat bus-bars, cables, etc. Manufacturer: Trico Fuse Mfg. Co., 2948 North 5th St., Milwaukee 12, Wis.

LUMINOUS SWITCHPLATE COVER for use over installed switchplates.

Features: This new switchplate cover is easily superimposed on already installed switchplates of either metal of painted types. Its pressure sensitive adhesive backing is protected by a smooth brown cloth to be peeled off at the time of in-



stallation. Application is simple, for the cover is merely stuck over the installed switchplate after the cloth is removed. Although cream-colored during the day the switchplate cover has the advantage of glowing in the dark after normal exposure to daylight or electric light. Since it contains no phosphorus or radio active material, it is completely harmless. Its face can be easily cleaned with soap and water or with cleaning fluid. This inexpensive cover should prove useful in home bedrooms, halls, baths, kitchens and in hospital and hotel rooms.

Manufacturer: Century Lighting Inc., 419 West 55th St., New York 19, N. Y.



FLAME-RESISTANT CHROMATE GASKETS replace rubber.

Features: A new type of gasket, consisting of a felt base, impregnated with a chromate pigmented compound which renders the material flame-resistant and corrosion-proof is replacing hard-to-get rubber. It is not affected by fuels and can also withstand relatively prolonged exposure to salt water without decomposition. Chromate gasketing employs a good grade felted wool as a base sheet material, impregnated with a specially prepaired chromate pigmented compound which is non-drying, tack and water insoluble and renders the felt flexible, and pressure resistant. A chromate gasket will maintain air pressures up to 25 lbs. per sq. in. at normal temperatures. Originally a substitute for low-pressure rubber gaskets used to seal joints in marine ventilating systems, chromate gasketing has demonstrated its usefulness in many other applications. It may be either factory pre-cut or cut from sheets at the point of use without special tools. Dark green in color, it is available in two thicknesses 1/8 in. and 1/16 in. Manufacturer: The Sherwin - Williams Co., 101 Prospect Ave., N.W., Cleveland 15. Ohio.

(Continued on page 206)



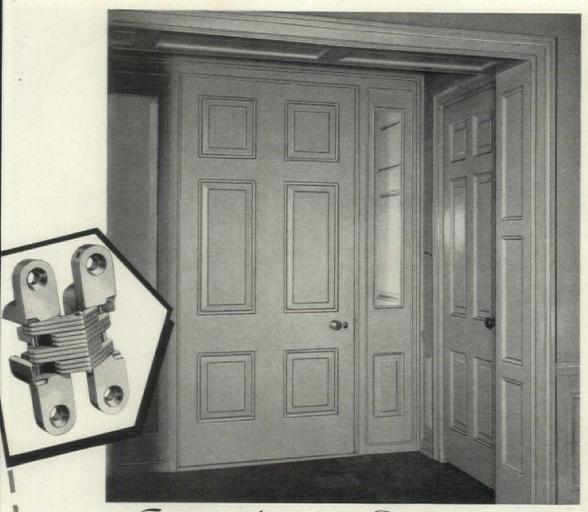
Send for this FREE booklet on home ventilating problems...

SURPRISING interest is being shown by architects and owners in this new booklet explaining some of the ventilating problems created by the advent of air conditioning and forced-draft heating.

This booklet is easy to read, easy to grasp. It should be in the hands of every architect and owner who is looking ahead to the home of tomorrow.

It is yours for the asking. If you have not already asked for your copy, mail the coupon now... If you desire extra copies sent to your clients, merely list their names and addresses on your letterhead.

"Spot" Ventilation MEANS Blo-Fan

Clip and Mail Coupon NOW! 

Streamlined Distinction

FINER ARTISTIC EFFECTS!

• These contributions to better and more attractive buildings are made possible through the use of SOSS INVISIBLE HINGES. This is the modern hinge—the hinge symbolic of building progress. The SOSS INVISIBLE HINGE permits of flush, streamlined surfaces and far more artistic doors, cupboards and secret panels. It provides greater opportunities for unusual design. It eliminates unsightly, broken surfaces—and surfaces marred by protruding butts. It places the hinge—which is a thing of utility and not of ornamentation—just where it belongs—out of sight.



Write for the Soss "Blue-Print Catalogue." This catalogue gives full details for the many applications of this modern hinge. It will be sent free to you on request.

SOSS MANUFACTURING COMPANY, 21767 HOOVER ROAD, DETROIT 13, MICH.





KEWANEE

Pictured above is the high voltage X-Ray



Firebox Boiler Flatcar Loadings Kewanee All-Weld for Hi-Pressure

machine in the Kewanee plant radiographing every bit of every seam to prove freedom from blow holes, from slag inclusion or faulty fusion from any cause. Test specimens are stressed to destruction to be sure that strength and ductility of all joints meet specifications.

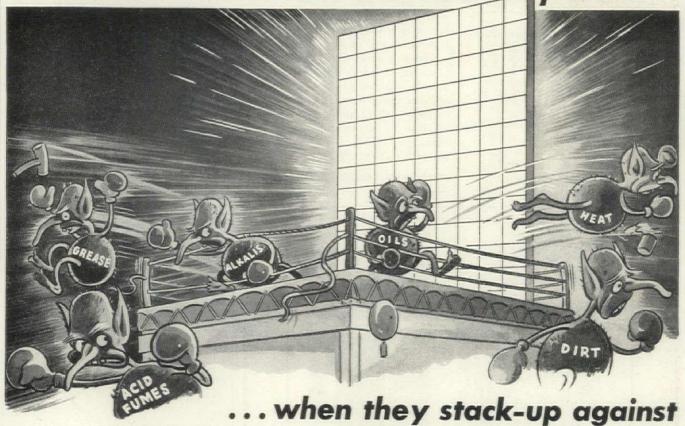
As a further precaution the welded boiler shell is "cooked" in a big reverberatory furnace to normalize any stresses that might remain in the seams.

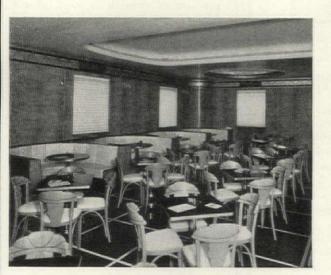


n District Office: 40 West 40th Street, New York City 18

Division of AMERICAN RADIATOR & Standard Sanitary CORPORATION

BLURMITES*...Licked Before They Start...





ATTRACTIVE-FUNCTIONAL

Pictured is the Drum Room of the Jefferson Davis Hotel, Montgomery, Ala. Vertically paneled wall of Marlite English Harewood Pattern, with drum design of frieze, point up the theme. Designed by Henry W. Genone, Chief Engineer, Dinkler Hotel Co., Inc.



MARLITE!

When Marlite's in, Blurmites are out! Make that "marginal note" on the practical side of your sketches for present and postwar clients! And there are many other substantial reasons why plastic-finished Marlite will play an important role in residential, commercial and industrial interior design as building restrictions are lifted. The modern medium for decorative expression, versatile Marlite offers a wide variety of popular colors and patterns. Thus, it's equally suitable for powder-room or lobby; executive office or gameroom.

And it not only adequately answers your need for a wall paneling easily installed and economically maintained, but Marlite also provides walls and ceilings that remain permanently beautiful. A new full-color catalog, showing many adaptations of Marlite, is ready for you. Write today! And ask for a free sample if you want to see for yourself. Marlite warrants "marginal mention" on all your interior plans.

*Blurmites—destructive agents, harmful to the finish of many interior wall, ceiling, and counter surfaces.

MARSH WALL PRODUCTS, Inc.

211 MAIN ST., DOVER, OHIO

PLASTIC-FINISHED WALL PANELS . FOR CREATING BEAUTIFUL INTERIORS

FEBRUARY 1945

BUILDING REPORTER

(Continued from page 202)

LUCITE with new heat resistant properties.

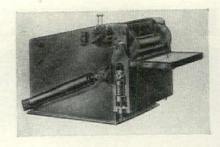
Name: HM-122.

Features: This new compound, whose entire output is now allocated to essential uses, combines heat-resistance 30° to 40° F. higher than general-purpose powders and other desirable properties previously unobtainable in a single formulation. HM-122 is outstanding for ease and economy in molding. Its faster setting properties, when used with properly heated dies, contribute to a shorter

molding cycle. Moldings of the new "Lucite" are unusually clear and brilliant, and possess excellent reflecting properties. The formulation can be obtained in a wide range of transparent, translucent and opaque colors for both indoor and outdoor use. These advantages together with lightweight, exceptional toughness, and good dimensional stability under exacting conditions, indicate it to be a material with great possibilities for postwar products.

Manufacturer: E. I. du Pont de Nemours & Co., Inc., Wilmington 98, Del.

SINGLE WING TANGENT BENDER smoothly edge bends sheet metal.



Name: Struthers Wells Single Wing Tangent Bender.

Features: This Single Wing Unit for edge bending sheet metal will handle practically all work that can be formed on the Double Wing Tangent Bender except such heavy duty jobs as doming refrigerator cabinet tops. The unit is also an improved brake. With proper dies it can bend sharp-cornered sheets and can produce any desired radius. It is especially suited to short runs and tangent bends which require frequent die changes. Hydraulically operated, it is of welded steel construction, and its dies are easily changed. The machine is available in three sizes for bending sheets of 36 in., 84 in. and 120 in. maximum widths by any length.

Manufacturer: Struthers Wells Corp., Titusville, Pa.

MOISTURE DETECTOR instantly measures per cent of moisture in wood, plaster, masonry, etc.

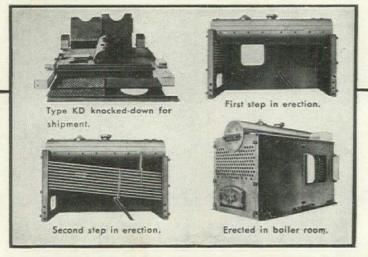
Name: Model R.

Features: This detector, used for quick moisture determination, is based on the latest electronic principles and takes advantage of new ideas in electrical cir-



cuits. Both surface and sub-surface readings are instantly obtainable within 7 to 25 per cent moisture range, with an accuracy of plus or minus 1 per cent. Operation requires no special skill. The electrode needles are forced into the lumber or other material to be tested, and the reading is taken by simply turning the dial knob until a small light above the dial flashes at the correct moisture content. The unit operates on batteries, is light weight and of sturdy construction. Price of this new meter, complete, F.O.B. the factory is \$67.50. Manufacturer: Colloid Equipment Co., Inc., 50 Church St., New York 7, N. Y.

(Technical Literature, page 210)



A "FUEL-SAVER" BOILER

that can be carried thru a Door or Window

Type KD heating boiler is shipped "knocked down" permitting the parts to be carried through a door or window. This eliminates costly cutting and patching of building walls, reduces boiler outage and speeds reconversion.

The Type C, twin section, is a heating boiler in halves, for installation where Type C one piece cannot be carried through existing passages. The only erection work is the bolting together of the two halves.

For years, International's "Fuel-Saver" Type C heating boilers have fulfilled the requirements for low cost heating in office and apartment buildings, hotels, schools, theatres, industrial plants, etc.

"Fuel-Saver" Boilers have cut heating costs in thousands of installations.

They are especially suitable for post-war heating requirements providing—

QUICK STEAMING: Due to rapid and positive internal water circulation.

MAXIMUM HEAT ABSORPTION: Due to effective distribution of heated gases.

EASE OF CLEANING: Due to accessibility of heating surfaces.

Complete range of standard sizes rated in accordance with S.H.B.I.-15 lb. A.S.M.E. Standard - for hand, stoker, oil or gas firing.

Every International Representative is a competent boiler man able to assist in solving heating problems.



Boiler Builders for 59 Years Write for bulletin describing Type C and Type KD Boilers. See description in Sweet's Architectural File of full line of heating boilers.

THE INTERNATIONAL BOILER WORKS CO.

HEATING DIVISION

320 BIRCH STREET . EAST STROUDSBURG, PA.

HEATING BOILERS TYPES C, KD, DD, K POWER BOILERS TYPES CR, FR, LFR, LFS



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NEW COOLERATOR

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SAYS SHE'S WAITING FOR COOLERATOR with the MAGIC FLAVOR-SAVER!

Before you design or build post-war homes, remember Coolerator can provide practically any type of home refrigeration . . . from the largest capacity Freezers and Electric Refrigerators to the most economical and streamlined Ice Conditioned Refrigerators.

THESE LEADING FIRMS ARE DISTRIBUTORS FOR AMERICA'S SOLE SPECIALIST IN HOME REFRIGERATION

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Little Rock, Ark., Holcomb Gunn, Inc. Los Angeles, Calif., Sues-Young Co. Louisville, Ky., Ewald Distributing Company Memphis, Tenn., Mississippi Valley Furniture Co. Milwaukee, Wisc., Taylor Electric Company Nashville, Tenn., Keith Simmons Company, New Haven, Conn., American Distributors, Inc. New Orleans, La., Modern Appliance & Supply Co., Inc. New York, N. Y., D. W. May Corporation

Export-J. H. Latham Oklahoma City, Okla., Jenkins Wholesale Division

Omaha, Neb., G. W. Onthank Co. Philadelphia, Pa., Elliott-Lewis **Electrical Company**

Phoenix, Ariz., Albert Mathias Co. Pittsburgh, Pa., J. A. Williams Company

Portland, Ore., Bargelt Supply Providence, R. I., Providence Electric Company

Richmond, Va., Wyatt-Cornick, Inc. Rochester, N. Y., Bickford Brothers St. Louis, Mo., Stanley Distributing Company

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San Diego, Calif., Gough Industries, Inc. San Francisco, Cal., McCormack & Company Schenectady, N. Y., LeValley, McLeod, Kinkaid, Inc. Seattle, Wash., Seattle Radio Supply, Inc. Sioux Falls, S. D., G. W. Onthank Co. Spokane, Wash., Prudential Distributors, Inc. Springfield, Mass., The Burden-Bryant Company Syracuse, N. Y., Paul Jeffrey Company

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Company Vincennes, Ind., Ebner Ice & Cold Storage Company



Buy More War Bonds!

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Combine BEAUTY with UTILITY



The widespread use of architectural metals will be greatly accelerated as soon as the war is over. In this age of functional design, there are wonderful opportunities for striking applications of metals in decorative design. And from the utilitarian point of view, architectural metals also provide added strength, safety and better construction.

Consider for a minute the many buildings erected during the past ten years where architectural metals have been used so effectively. Then, think how much you can do with these versatile products in the buildings you are now designing.

For entrances, store fronts, stairways, balustrades, balconies, grills, lighting fixtures, friezes, and the countless other uses architectural metals, both ferrous and non-ferrous, offer you great latitude in colors, characteristics and qualities. They can be shaped to your own ideas and they give you a greatly widened range for the expression of new architectural concepts.

Plan now to use more ferrous and non-ferrous architectural metals after the war for both distinction and utility. Immediately upon cessation of hostilities, architectural metals will be available as quickly as any other building materials.

Fabricators of architectural metals are interested and ready to assist you in getting ready for the coming building boom. Write today for directory of leading architectural metal fabricators. Address Dept. F-2.

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PEOPLE'S WANTS...TOMORROW'S LIGHT AND ROSES





Arm-Chair Editors have no place at House Beautiful. Digging out facts for their monthly "Home Planners Study Course" means first-hand contact with topflight authorities. Here Editor Elizabeth Gordon answers home-making questions at a meeting of The Home Planning Institute of Philadelphia, sponsored by the Quaker City Federal Savings and Loan Association.

2 "Possibilities vs. Probabilities" of future lighting are discussed by fact-ferreter Florence Paine with Dr. Matthew Luckiesh, G. E.'s Residential Lighting Director and nationally known master of lighting psychology. For a thorough analysis of the subject read "What Postwar Lighting Will Mean in Your Future Life," the sound factual article in House Beautiful's February issue.



Getting to the root of plans for postwar roses set House Beautiful's Garden Expert, Ralph Bailey, to checking on newly developed species in his trial garden before introducing them to the public. Here's famous rose-hybridizer Eugene S. Boerner, Vice-President and Research Chief of Jackson & Perkins Co., Newark, double-checking Bailey's results.

Analyzing Value Received for home-makers takes Feature Editor Marion Gough to John Gerald, Director of B. Altman's Decorating Department, for serious discussion. Her article "Do You Get More When You Pay More" in the February House Beautiful features four rooms designed by Mr. Gerald to show what \$1000, \$2000, \$3000 and \$4000 will buy in home furnishings.

HOUSE BEAUTIFUL is the magazine that interprets your market for you! It's FIRST in the home field...the must magazine for those who make it their business to know their business.





HOUSE BEAUTIFUL

TECHNICAL LITERATURE

(Continued from page 206)

KITCHEN EQUIPMENT. Builder's Kitchen, 22 pp., 8½ by 11 in. This booklet for builders reveals how factory-finished, steel kitchen equipment saves the builder important labor and material costs. It offers the builder steel kitchens at no greater cost than carpenter-built equipment; a reduction in installation and finishing time; the advantages of accessible stocks warehoused in every part of the country. Typical units of various types of equipment are illustrated, sizes listed and advantages described. Mullins Mfg. Corp., Warren, Ohio.

a neat, narrow-line corner.

LIGHTING. The Whole House—a Lighting Fixture: and From an Architect's Sketch Book-Postwar Lighting For the Medium Home, each 10 pp., 83% by 10% in. These two booklets on postwar lighting for the home, suggest new designs which can be used by architects and fixture manufacturers to produce interesting and varied lighting effects. In the booklet, The Whole House-A Lighting Fixture, Nathaniel A. Owings, Architect, expresses his structural concept of home lighting and its effect on the whole house. A small house plan is shown with lighting methods and fixtures clearly indicated. Special points such as window fixtures, portable lamp fixtures, and recessed cove lighting arrangements

are illustrated in detail. Attractive pictures showing rooms with new lighting arrangements are also included. The booklet—From an Architect's Sketch Book, discusses light for better living, and illustrates the text with room by room pictures. Lamp Dept., General Electric Co., Nela Park, Cleveland 12, Ohio.

HEATING, COOLING, AIR CONDITIONING. Trane Postwar Products, Bulletin No. PB-290, 84 pp. 8½ by 11 in. This postwar bulletin offers a selection now of heating, cooling, air handling and air conditioning equipment for construction to be started after the war. It includes data on capacities, roughing-in dimensions, and other information on all Trane products. A section is devoted to illustrations of these products and includes many new ones such as an induced draft cooling tower, a revised refrigeration line, new convector models. and improved hot water products. Although the information in this booket is condensed, it will permit accurate selection of unit size and capacity for the equipment shown. The Trane Co., La Crosse, Wis.

SCREEDING EQUIPMENT. Tamblyn System, 6 pp., 81/2 by 11. This pamphlet discusses Tamblyn Gunbarrel Screeding Equipment, a serviceable product for constructing concrete floors on the ground, on wood forms and on bars joist or steel construction. A description of the equipment used and information on its assembly is included. The accurate work which is a result of this method and the corresponding savings in cost are discussed in addition to other advantages. Illustration sheets deal with the laving of concrete floors on the ground, on wood forms, and on bar joists. Tamblyn System, P.O. Box 1465. Denver, Colo.

ELECTRICAL EQUIPMENT. Square D Digest, Sept. 1944, No. 129, 75 pp., 8½ by 10½ in. This abridged catalog contains numerous listings and photographs of products not included in the previous issue. It is devoted mainly to descriptive and technical information on such products as safety switches, service equipment, multi-breakers, etc. Square D Co.. 6060 Rivard St., Detroit, Mich.

REQUESTS FOR LITERATURE

ARCHITECTURAL SECTION of Engineering Dept. of the Marathon Corp., Menasha, Wis., requests manufacturers catalogs for an A.I.A. file.

J. Mansfield Woodward, Architect and Builder, 526 E. Third St., Lexington, Ky. would like to receive catalogs and literature for a complete A.I.A. file.

Sybella Neff La Berge, Washington University, St. Louis, Mo., would like to receive manufacturers catalogs and building material data for an A.I.A. file.



Pella prefabricated corner mullions save material and hours of construction

time. Steel construction prevents rotting and warping. Permanent plumbness assures smooth window operation. Investigate Pella's ex-

ALSO PELLA AWNING AND PROJECTED SASH AND PELLA VENETIAN BLINDS

FREE for Architects and Builders . . . A file pocket containing 22 loose sheets of scaled details that enable you to create individual and unusual window arrangements from Pella's stock size Casement Units. Send for your FREE set today. The Rolscreen Company, Dept. A-25, Pella, Iowa.

tensive line of stock size casement units that permits more

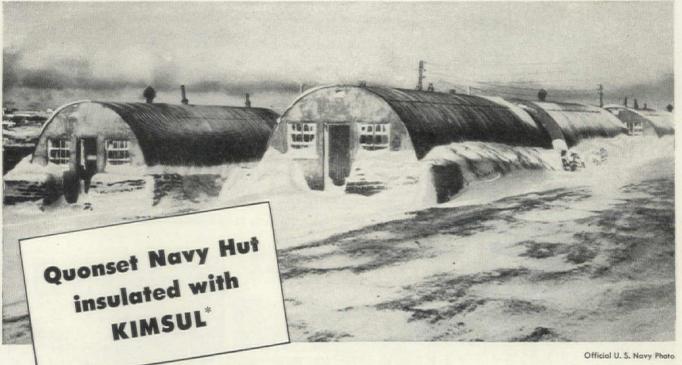
than 480 possible combinations of single windows, corner windows, bays, picture and kitchen windows. All factory fitted and assembled, ready to set right in the wall.

◆ PELLA'S ALL-STEEL JOINING MULLION is only 1½" wide! It is a real space saver, stronger than the best wood mullion.

CASEMENT WINDOWS

Take a tip from the Navy!





In freezing arctic wastelands, and in the heat of the tropics, the Navy's famous Quonset huts provide welcome shelter to thousands of men, and protect vast quantities of supplies from the elements. These huts, insulated with KIMSUL, to protect against heat and cold, are the most widely-used prefabricated houses on earth. Prefabricated, easily transported and quickly constructed, these structures serve as barracks, administration buildings, hospitals, workshops and warehouses.

The advantages which make this insulation best for the Navy's use are highly desirable in insulating *homes*, too. The low cost of KIMSUL is important. So is the remarkable speed and ease with which it can be installed. And KIMSUL

is one of the best heat-stoppers known. Its k factor is 0.27.

This is the ONLY many-layer insulation. Its construction is scientifically superior to that of loose "bulk insulations", and to blankets with only one or two plies. Why? Because you get uniform coverage over every inch of insulated area. The density doesn't vary; hence, there are no heatleaks through unprotected spots.

Furthermore, KIMSUL, unlike other insulations, cannot sift or settle. Rows of strong stitching hold the blanket's shape permanently, prevent sagging. KIMSUL stays put, and stays RIGHT, for the life of the structure in which it is installed.

Take a tip from the Navy-specify KIMSUL insulation.

For complete technical data on Kimsul Insulation refer to Sweet's 1945 Catalog or write Kimberly-Clark Corporation, Neenah, Wisconsin

POSTWAR HOME





*KIMSUL (trade-mark) means Kimberly-Clark Insulation

A PRODUCT OF
Kimberly
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RESEARCH



ZONOLITE CONCRETE and ZONOLITE PLASTER Provide

Fireproof Insulation Against Heat and Sound in MERCANTILE BANK BUILDING, DALLAS, TEXAS

Leading architects and structural engineers in all parts of the country are specifying Zonolite Concrete and Zonolite Plaster with increasing frequency in important new buildings . . . because they find that Zonolite speeds construction and provides lightness and insulating and fire resistance values found in no other material.

The structural steel frame and cellular steel "Q" floors in the Mercantile Bank Building were fireproofed with Zonolite plaster. The density of the Zonolite concrete floor fill was only 30 lbs. per cubic foot compared to 150 lbs. per cubic foot for ordinary concrete. Zonolite plaster weighs only 39 lbs. per cubic foot compared to 100 lbs. per cubic foot for ordinary sand plaster. Zonolite fireproofing weighed approximately 15 lbs. per lineal foot of beam as compared to 240 lbs. per lineal foot of beam for standard concrete fireproofing.

Thus, Walter W. Ahlschlager, the architect, accomplished two major objectives when he chose the combination design of Robertson "Q" Floors, Zonolite Concrete and Zonolite Plaster and Zonolite Fireproofing of structural steel—a saving of structural steel in excess of 15% when compared with standard office building practice and from 45 to 60 days of erection time. This method allowed the Zonolite concrete floor topping to be placed after enclosing masonry walls were erected.

Mail coupon for detailed information about Zonolite's many uses.

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and Granular Fill insulation.

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NATURALLY, home buyers are going to stumble over each other to buy new homes the moment they're available.

But from the word "go" the builder who plans homes designed for better living will have a decided sales advantage.

Farsighted construction men visualize a steady market for possibly a million new homes a year. And they're planning to get a greater share of these big-volume sales by planning homes that will give more satisfaction to the buyer.

Such homes will be designed "from the inside out." They will be well built, adequately wired and will include automatic heating, proper lighting, as well as a well-planned electric kitchen and laundry.

The best is easiest to sell

Surveys by many organizations—FORTUNE, the U. S. Chamber of Commerce, and government agencies—show that electrical equipment will have close to first claim on the postwar buying dollar.

Home buyers have been led to expect vast improvements in postwar construction. "All-electric" homes were merchandised successfully by hundreds of builders before the war.

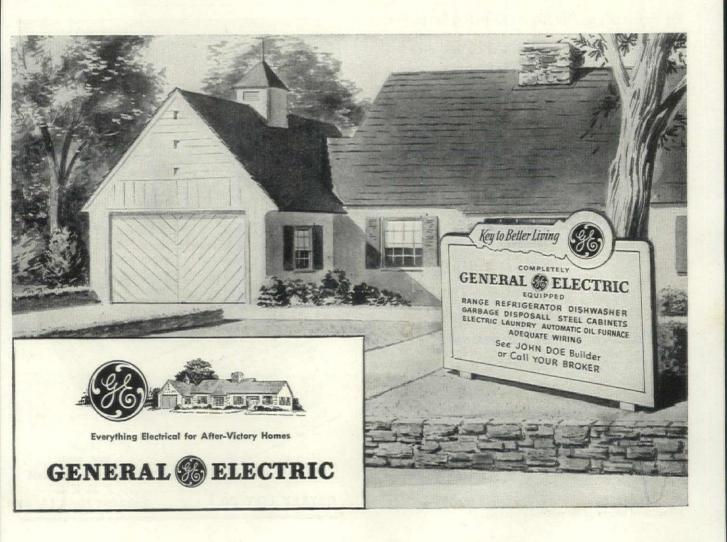
The mortgagee will like the "all-electric" home, too a complete home, giving satisfaction to its owner, is one of the best possible payment assurances.

General Electric is busily engaged in war work. G-E appliances and materials are not at present available. But after victory, you can count on G.E. for your needs, and on aggressive support of a complete building and merchandising program tailored to your operation.

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FOR VICTORY—General Electric is working night and day to back the attack. You can help, too, by buying and holding more War Bonds than before.

TUNE IN: "The G-E House Party," every afternoon, Monday thru Friday, 4 p. m., E.W.T., CBS. "The G-E All-Girl Orchestra," Sunday, 10 p. m., E.W.T., NBC. "The World Today," News, Monday thru Friday, 6:45 p. m., E.W.T., CBS.



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To aid discharged veterans secure employment in the professional and executive areas of the building industry and affiliated branches, The FORUM opens its columns to applicants in the categories below.

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350 FIFTH AVENUE

NEW YORK 1, N. Y.

For additional information see publisher's letter page 52





An old material—in new forms—solving new problems

- Laminated oak flooring. Utilizing clear wood on face, lower grades in core. Made at low cost on continuous gluing machines. Waterproof, heatproof, moldproof glue line.
- Laminated wood barrel stave. Molded to compound curve. Durable, splitproof. Withstands steam-cleaning, rough handling. Waterproof, heatproof, moldproof glue line.
- 3. Plywood tube. Light, strong. Adaptable to masts, supporting members, containers, piping. Waterproof, heatproof, moldproof glue line.

 Γ YOU have always looked at wood as something that splits and warps—look again!

Gluing "thin ones into thick ones" changes wood's physical characteristics. The grain patterns of no two plies of wood are alike. When the plies are glue-lami-

nated, the grain crosses, and each ply holds its neighbor from splitting and warping. Each ply reinforces the other.

Modern durable glues make such constructions practical by holding the plies together with a permanent bond that withstands every hazard to which the construction may be subjected.

If you have a problem in translating Ideas into Wood, call on us. Our direct experience with a large cross-section of America's entire wood industry will be of help to you.

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Glues for Industry

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Division of The Borden Company

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215



I NEED WOOD
THAT'S SAFE
FROM TERMITES!

I NEED WOOD
THAT WON'T DECAY
PREMATURELY IN
DAMP CLIMATE





RESISTS FIRE

Decay, termites and fire are triple threats to the life of wooden structures. Fight them all at once by using lumber that's been pressure-impregnated with Du Pont Chromated Zinc Chloride.

CZC is clean, odorless, economical. It does not alter the natural strength, appearance, workability and other desirable properties of wood. When lumber is again available, be sure you have on hand this book on the advantages to you of CZC-treated lumber. Use the coupon now!

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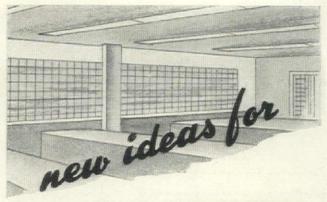
SPECIFICATION AI

The advertising pages of Forum are the recognized market place for those engaged in building. A house or any building could be built completely of products advertised in The Forum. While it is not possible to certify building products, it is possible to open these pages only to those manufacturers whose reputation merits confidence. This Forum does.

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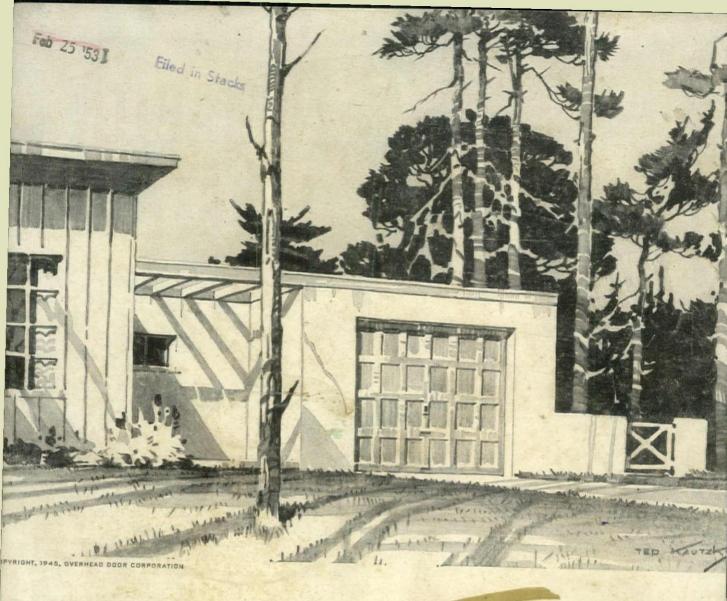
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