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Growth and decay of the city.
Six-year public works program.
Long-range improvement of downtown area.
Redevelopment of typical residential neighborhood.
Planning by Philadelphia school children.

MIDWEST BAB-O PLANT
Architect Henry L. Blatner sells an old packaging firm a one-story layout with room for storage and inside loading.

HOUSES
Remodeled farm house in Connecticut by Henry Hebbin, Architect... Arizona house for winter residence by Arthur T. Brown, Architect... Hilltop house in Los Angeles' by Harwell Hamilton Harris, Designer... Compact and economical small house for the Midwest by Alden B. Dow, Architect.

PRODUCTS & PRACTICE
Brick-sheathed marquee uses ingenious method for attaching brick to concrete... Light-weight modular partition system... Cold bending of pipe coils.

ANNOUNCEMENTS

REVIEWs
The Saga of the Lost "Dore Collection"... The Arts Work Together... Your Solar House... Flats.

BUILDING REPORTER
Home heating units... extended surface radiation... wood strip flooring square... aluminum double hung window.

TECHNICAL LITERATURE
Broadcast transmitter buildings... concrete houses... concrete roofs.

* ERRATUM: Due to an error in imposition, pages 100 and 101 are out of sequence. For coherence, read pages 102 and 103 first.

Cover photo (New Philadelphia): Barn Steller
"AND THE CUSTOMERS LOVE IT!"

Thurman Blue, President of the Blue Construction Co. of Calumet City, Illinois, credits much of the company's selling success to the policy shown above. In Lansing, and Burnham, Ill., 550 homes will soon be finished, selling for $8800 and up. And they're selling faster than they can be built.

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Write Andersen for full information, or consult Sweet's Architectural or Builders' File.

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Here's today's easiest way to provide small kitchens with big-kitchen facilities—Kelvinator's new "SPACE-SAVER" PACKAGE!

**Here's the New Compact Electric Range!**

Only 21 inches wide—new design permits installation flush against wall. A full-sized 2-unit oven for baking and broiling. Automatic oven temperature control, one 8" and two 6" 7-heat surface units for electric-fast, safe, cooler cooking. Beautiful exterior of one-piece wrap-around porcelain, porcelain acid-resistant top, recessed sloping switch panel, oven signal light and handy appliance outlet. Kelvinator quality throughout!

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Here's the new refrigerator with 50% more storage space—6 cu. ft. compared to the previous 4 cu. ft. models, but takes no greater floor space. Big, stainless steel freezer... ample room for tall bottles, and shelf space galore for daily food storage.

For your small kitchen problems, use Kelvinator's new "SPACE-SAVER" PACKAGE!

For further information, write Nash-Kelvinator, Detroit 32, Mich.
BUILDING MONTH. Everybody agreed that 1948 was going to be a good year. Even the most pessimistic guesser—F. W. Dodge's Thomas Holden—guessed that it would be at least as good as busy, housebuilding 1947. The joint Department of Commerce and Department of Labor forecast was the most optimistic: the government statisticians looked forward to $15.2 billion worth of new construction, with a 25 per cent increase in housebuilding accounting for the biggest part of the rise (see figures, p. 10). The Producers' Council took a more moderate view: $14 billion—a 13 per cent dollar increase over 1947—is what the materials' men expect.

The forecasters all shared the opinion that, while housebuilding volume is trending upward, industrial construction is leveling off. (A notable exception: Admiral Ben Moreell's sharp retrenchment in the long-term FHA program or the GI guaranty plan, but rather a gradual, general tightening up on appraisals and a scaling-down of mortgage loans. It may also mean a cold shoulder for any new proposals to stretch government credit farther—such as the American Legion's bill for federally backed housing cooperatives. The new trend was already (but rather weakly) apparent in the Senate Banking and Currency Committee's amendment to the bill boosting FHA's Title VI insurance ceiling by another $1 billion. The amendment instructs FHA to "use every feasible means to assure that estimates [of necessary current costs] will approximate as closely as possible the actual cost of efficient building operations."

Building money already felt a firming of interest rates, while the general tightening of mortgage credit was making inroads on the GI home loan program. The National Association of Real Estate Boards, taking its 47th semiannual look at the real estate market, said that in almost one-fourth of U. S. cities long-term mortgage money is not now readily available to veteran home buyers. Said NAREB: "The old-time regional maladjustment in mortgage flow, which the FHA and the HLBA have done so much to correct, is reappearing."

But even Eccles had said: "Production is the ultimate solution for inflation." This was the rock-bottom of housebuilding's dilemma. Curbing housebuilding credit would make it harder to buy houses—but it was a little like pounding down a cork in a near-explosive bottle. Everybody knew that the best way to take the heat off house prices was to build houses for every family who needs one—at prices they can afford to pay. That job, as it had always been, was up to the housebuilding business.

HOUSES

Foley thinks grass-roots conferences can lick prices p. 9
Government-backed bonds for veterans' cooperatives? p. 10

BUILDING MONEY

Golden flow of housing credit may be slowed p. 11

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DESIGN

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MARKET

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CITIES

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of repeat performance of the successful campaign he launched last spring to get rental housebuilding underway. Foley would like to see conferences on ways and means to lower prices initiated by the building industry on the local level. These conferences would be no attempt to pin the blame for the boost in house prices. They would be, rather, "disarmament" conferences in which everybody involved in the price of a house would be expected to try to find out how he could cut it down.

Foley takes a cheerful view: "Greater productivity, still more ingenuity in design, merchandising and land use can cut house prices. It is not a matter of reducing the 'take-home pay' of either management or labor. It is a matter of putting less labor and management pay into each house, of reaching a lower unit cost."

AMERICAN LEGION

Its housing parade marches down the middle of the road

Looking anxiously for a safe place in the current housing mess, the American Legion over the last year has been hopping in and out of the real estate lobby's pocket at a rate almost too fast to follow with the naked eye. From time to time the Legion has asked for government controls to speed veterans' housing. But, each time, a sobering talk with realtors' Herbert U. Nelson meant the real beginning of a coolness in the veterans' housing movement in the U. S. Their own opinion (the T-E-W bill raised the old question: why hasn't the Veterans Homestead Act of 1948, intended to ease financing for veterans' cooperative projects by providing the bolster of government credit.

Financing for veterans' cooperatives is, of course, already available under VA guaranty or FHA mortgage insurance. But the Legion expects to cut the cost of financing even further by its proposal for 40-year housing bonds, to be fully guaranteed by the government in both interest and principal. Another bid for big investors is the proposal to make the bonds tax exempt.

The Legion's bill, just introduced in the House by Representative Edith Nourse Rogers (R., Mass.), gives the Veterans Administration the job of managing the cooperatives. VA would be empowered to:

- Charter a Veterans Homestead Association upon the application of five or more veterans.
- Supervise the operations of such Associations.
- Sell $2 billion worth of bonds to be issued by the Associations (up to $10,000 worth for each member) and set the interest rate on such bonds.
- Loan money for interim financing, pending issuance of bonds, from a revolving fund of $100 million.

To make sure that the cooperative housing meets the needs of moderate-income groups, the bill puts a $10,000 ceiling on each housing unit and provides that any veteran may become a member of an Association by payment of $100. The Federal Works Administration would also be empowered to make $200 million worth of 50 per cent grants-in-aid to communities for streets and public service facilities in connection with the veteran developments.

Marketing of the cooperative housing bonds would probably work much like the sale of their closest present parallel: the tax-exempt public housing bonds issued by municipalities. The big investors have found it a profitable operation. The complete issues of these bonds, relatively small, have resulted in smaller lots to insurance companies and other building investors. Despite recent deep sag in the bond market, guarantee would be enough to make cooperative housing bonds attractive. The Legion's bill has done its best to woo further extension of government support to an already highly inflated area (see cut).

At a maximum, the Legion's bill means the real beginning of a cooperative housing movement in the U. S. The bill, by its low-down-payment and $10,000 loan stipulations, has done its best to ease financing even further by its proposal for 40-year housing bonds, to be fully guaranteed by the government in both interest and principal. Another bid for big investors is the proposal to make the bonds tax exempt.

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The Legion's bill has done its best to woo further extension of government support to an already highly inflated area (see cut).
n's decision to by-pass the accumulated experience of the federal housing agencies and give what may turn out to be a big housing job indeed to the Veterans Administration.

make veterans' cooperatives really and to protect cooperative members their own inexperience, a broad-scale program comparable to the Federal Housing Administration's pioneering standards for federal mortgage insurance would seem none too small an effort.

BUILDING MONEY

HOUSEBOAT ROCKS

Federal Reserve Board's blunt Marie Eccles last month poked a finger into the soft spots in the nation's quesy economic belly. Eccles had found nothing everybody has known for some time: the current housing boom rests upon a foundation of government credit, was merely less cautious than most government men in pointing to a soft spot that nobody dares to cure.

Eccles told Congress that one way to fight inflation is to curtail government-sponsored home and farm loans. But, as a housing shortage stalked the nation, nobody seemed to make it any harder than it is for Americans to connect with credit.

The shape of the dilemma had already been made plain in the veterans' home loan program. VA had deplored an apparently growing tendency among lenders to require heavy down payments from veterans buying houses under government guaranty, the lenders could argue that one way to stop a man from buying a house he cannot afford—and so adding his personal push to inflation in housing prices—is to ask for a stiff down payment.

Biggest veterans' hospital, the Franklin Delano Roosevelt, is almost finished near Peekskill, N. Y. Construction is under direct supervision of the Corps of Engineers, New York District. Hospital will cost about $4,200,000.

(Continued on page 12)
its appraisal base of “current costs” rather than “stabilized values” and its provision for high-percentage loans made direct to builders. The maximum permissible mortgage for a single-family house has also gradually been raised: it is now $8,100, which means a 90 per cent loan on a $9,000 house.

The Big Question. Twin House and Senate bills to boost the Title VI insurance ceiling by $1 billion were in the hopper. Nobody doubted that Congress would fail to pass them—to do so would mean the collapse of housebuilding. But the real question will come when the legislation creating Title VI expires next April. Then Congress will be obliged to decide whether the liberal credit terms of Title VI need to be tied tighter—a curb for which FHA will undoubtedly ask.

The worst of it all was that the government’s housing credit policies have never been tested by a skidding housing market. With the government now obligated for some 925,000 veterans’ home loans amounting to $2½ billion, and, altogether, for one-half the real estate mortgages in the country, it seemed high time to think about what a steep downswing might mean. One sign that private lenders see trouble ahead: most agreed last month that a stiffening in interest rates is at hand.

MATERIAL

RICEMENT

Rice hulls into building blocks

In the rice-growing delta of Texas and Louisiana, rice millers have now and then recalled the birth of Celotex from sugar cane waste and wondered if some similarly bright future could not be found for rice hulls. For most millers, rice hulls are a big (20 per cent of every rice bushel) and expensive ($10-$20,000 a year) disposal problem. For most millers, rice hulls are a big (20 per cent of every rice bushel) and expensive ($10-$20,000 a year) disposal problem. But the Lustron contract is the which the three big trades have jo one master agreement. More impor is also the first to provide offici reduction of the dozen trades cust involved in housebuilding to a basic

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Lustron AHEAD

Three AFL building unions sign pact on industrialized house

The AFL—once prefab’s biggest recommitted last month extended a policy which may do more than anything put Lustron houses on the market. Lustron’s determined Carl Strohl]/loved a two-year contract with the three main building trades—carpenters, electricians—covering both Lustron and the competitors. He forsees a substantial market for small fireproofing blocks, cheaper than comparable concrete or wood construction.

Hollis thinks “ricement” is essentially an inside building product because it is porous. He has, however, adapted it for exterior wall construction by adding stucco or a dash coat of plaster. He forsees a sizeable market for small fireproofing block, about 2 x 8 x 12 in., for use between walls, where ricement’s nailability and sawability would be a big advantage.

The news of Chappell’s ricement block has already spread around the world, and the initiators have dozens of inquiries from rice-growing regions, especially in Japan.
Jackson Higgins, ebullient chief of Resources, Inc., has brought forth a new version of his lightweight cellulose, "Thermo-con," peeled off the which it originally was clothed as "Thermocon." "Thermo-con," a low-carbon-steel panel the job with the old "Thermo-con" big user of critical material—sidetracked in favor of on-the-job in plywood forms of the improved "Thermo-con," a mix of Portland cement, and a secret foaming agent, "Thermo-con" houses have been and tested satisfactorily in New and the company is now franchisers for production by the first of Higgins Homes, a division of Resources, Inc., completed the expensive of the two test, six-room at a cost of approximately $7,600, 6: $1,285 for a special utility less than a week. Higgins says that mixed men can erect the forms in ours, and pour the walls and roof hours. An 18-hour set is required the walls, partitions, and roof are with a vapor bath, and work on hours, windows can continue.

Higgins estimated that the house cost ft.; he believes, however, that experienced contractor, building a mul-
Thermo-con" houses without using steel, should be able to erect them out $4 to $6 per sq. ft.

Insulation qualities, durability, utility, and low maintenance costs are for the new lightweight material, can be controlled by mix within the range of 25 to 60 lbs. per cu. ft.; the efficient is 45 lbs., used in 6 in. walls; all thickness is regulated by spacers made of "Thermo-con"—held in by 5 in. compression bolts to absorb stresses set up when 26-minute, 125 per cubic expansion cycle takes place. Thermo-con" will neither absorb nor trans-

Wall reinforcement comprises ex.

Steel beams, reinforcing mesh, and wired steel mesh are used in the roof.

Windows and door frames in the Thermo-con" house are provided with a steel framing implanted in the mold.

First Thermo-con House, complete with furnishings, and the two levels of foliage, was put up in New Orleans in a week. Monday morning to Saturday night. Fifty thousand visitors have inspected it.

Bedroom and living room of Mr. Higgins' house. When plywood forms have been removed after pouring, Thermo-

seal, a plastic paint, is used in finishing.
LOOKING FORWARD

Kiplinger sees typical city family living in prefabs by 1960

Kiplinger's magazine, The Changing Times, last month succumbed to a universal urge. It asked a provocative editorial question: "What kind of place will America be in 1960?" To answer its question, Kiplinger drew on the Twentieth Century Fund study, America's Needs and Resources (see Forum, May, '47, p. 10) and on what it describes as the "thinking of scores of businessmen, educators, sociologists and scientists."

What the Kiplinger forward-lookers think American houses will be like in 1960, and why, is worth some attention. The magazine finds a typical city dweller, factory worker family (guaranteed annual wage: $3,196) living in a house which "would have been seen on the cover of Time Architectural Forum at various times during the 1930's and 1940's ... The house is a factory job ... It cost $6,000."

Material Competition. This typical family's house happens to be porcelain-enamed steel, but Kiplinger thinks it "could just as well have been plastic blocks, concrete, wood, even brick or stone, at about the same price." The reason: "In the last few years the producers and distributors of the older building materials and the old craft unions have reorganized their methods, in the face of competition from newer materials, to deliver a comparable job at a comparable price."

"For the first time in history, the price of houses is beginning to go down as production rises."

Building Bloc Splits. The Kiplinger notion of what made all this happen may be alarming to some:

"The Taft-Ellender-Wagner housing bill was finally enacted, with strong middle-class support. With some assistance in public financing ... large scale developers began to rehabilitate run-down neighborhoods and erect big housing developments. "Behind the scenes, the bloc of builders, labor unions and bankers which together had resisted modernization of the home building industry now begin to split. Fear of government competition, heavy industry, began to cast around in earnest for means of beating the government to the draw. Banks and insurance companies had less reason to fear mass-production housing than during the 1930's and early 40's, when they had strenuously resisted 'prefabrication' as a danger to their mortgages in a depressed real estate market. The high postwar price level protected their stake in the older houses and made them willing to back the new."

Thousands Wiped Out. "With a positive push from Wall Street money and Detroit skill, factory houses really began to roll by the mid-50's ... Thousands of small contractors were wiped out, although some grouped together or found jobs with the big operators."

"Beginning about 1955, a swelling volume of production from the assembly line and new methods of erecting houses on the building site tapped the 'mass-market.'"

"With the production of private housing at 1,377,000 units annually by 1960, private industry since 1947 has come within 82 per cent of providing decent shelter, by modern standards, for every man, woman and child in the United States."

DESIGN

PACIFIC LUXURY

J. P. Morgan's Corsair is redesigned as commercial cruiser

J. Pierpont Morgan's famous black-hulled yacht "Corsair," behind whose gilded bowsprit the late financier cruised the waters of the world for ten years before giving her to the British Admiralty in 1910 for wartime convoy duty, has been refitted as a luxurious Pacific commercial cruiser. William Schorn Associates did the job for Pacific Cruise Lines, Ltd.

The rakish (342 ft. overall, 42 ft. beam) yacht will now ship 85 passengers, instead of the master and ten guests for whom it originally was built. The lavish rooms and suites feature a folding marine sofa-bed, designed by architect-naval architect-industrial designer Schorn while he was chief of the U.S. Maritime Commission's Joiner Design Section during the war. Another solution to stringent shipboard space limitations is a chiffio-crest which includes a dresser, a writing desk, and a dressing table (see cuts). Throughout the design, with its unique marine problems (such as proof against stowage of narcotics), emphasis was on luxury. One of the few interior finishes retained was the original teakwood stairway and corridor paneling in the $2,000,000 Morgan yacht. The somber teakwood, however, was bleached to a sand tone, and waxed.

LONG JOURNEY HOME

Convair car runs out of gas

If you were born to walk the grounds remain there; do not fool around!

—Hilaire Bell tossed away."

When Consolidated Vultee first began thinking about converting from B-24's to peacetime planes, it engaged top-flight Industrial Designer Henry Dreyfuss to develop his airborne ideas. Among the things he did was a design for a flying car—the Convair car—to be made in two sections: the first to be a lightweight automobile; the second an airplane assembly, with wings, tail, and 190 h.p. engine. The car alone would be used on routine, everyday local trips.

Loren F. Smith
An assembly could be parked at the airfield, ready to be picked up and taken to the car's roof whenever the owner needed to take an extended, cross-country trip. Both car and plane were to be connected from the driver's seat, The whole complete with the airplane assembly at cost around $6,000. It seemed the answer to many an American's prayer. Last month, at Consolidated Vultee's Diego plant, the first of three Convair models took off on a short flight. It looked well, looked a little like Ganymede being carried off by the mythological eagle.

A P Wirephoto

EXPANSIBLE HOUSES: federal housing agency offers prototype plans.

One week later, however, in another test flight, the Convair car came grief. Evidently lacking sufficient fuel return to his field, the pilot attempted an emergency landing on very rough ground. He the plane up on its nose, and crashed. Neither of two occupants was injured seriously. The machine itself would soon be back in operation. Only serious, and unfair, casualty: the Convair car's good reputation.

AN-AMERICAN MEET

Five A.I.A. delegates look at Lima

late in October the A.I.A.'s Julian Clarence evi, chairman of its committee on international relations, and four other U. S. delegates met with Central and South American architects and planners in Lima, Peru to cement friendships, discuss problems, exchange information, look at each other's exhibits. The occasion was the sixth Pan-American Congress of Architects the first such get-together since Pearl Harbor.

The conference soon found themselves up to their ears in discussion of problems. To facilitate an exchange of information, the Congress was divided up into five sections, dealing with "Philosophy of Architecture," "Architectural Education," "American Architecture and its influence on continental Architecture," "Planned communities," and "Housing," respectively. While it developed that there was probably too much material to discuss—and too little time to discuss all of it fully—the American delegates found themselves greatly impressed by Latin America's building boom and by Latin American architects' competence and vitality.

To demonstrate U. S. achievement in architecture since the Pan-American archi-

(Continued on page 16)

Like many home buyers, the Housing and Home Finance Agency thinks an expansible house is a fine idea. Last month the Agency offered the public a half-dozen plans for starting small and expanding gradually (two samples shown here). Prepared by the HHFA's technical staff, the prototype plans betray a new federal inclination toward contemporary design, conspicuously not shared in the past by local FHA offices. Leading question: will FHA cooperate in accepting expansible houses for mortgage insurance? So far, FHA has thumb-downed a one-bedroom house. But the high command promised more headway for houses based on HHFA models.

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One Prototype House begins as narrow strip, expands by extending living area as dining space, adding workroom, bedrooms, garage with covered passageway.

ALTERNATIVE PLAN starts out with more space, adds separate dining room, bedrooms, outdoor stage cabinets. Note living room's solar wall.

Like many home buyers, the Housing and Home Finance Agency thinks an expansible house is a fine idea. Last month the Agency offered the public a half-dozen plans for starting small and expanding gradually (two samples shown here). Prepared by the HHFA's technical staff, the prototype plans betray a new federal inclination toward contemporary design, conspicuously not shared in the past by local FHA offices. Leading question: will FHA cooperate in accepting expansible houses for mortgage insurance? So far, FHA has thumb-downed a one-bedroom house. But the high command promised more headway for houses based on HHFA models.

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The Architectural FORUM December 1947

was NAREB's "Five Year Plan" to sell five
...

Apart from boosting the "Five Year Plan," NAREB delegates were unusually critical of Association policies and program, and evidently dissatisfied with executive vice-president Herbert U. Nelson's preoccupation with politics—especially his remarks about starting a Home Owners' Party. Nelson's proposal to affiliate with the National Home and Property Owners' Foundation was slapped down, and his drive for a hike in dues was defeated. To make the point still clearer, the convention then elected middle-of-the-roader Robert C. Brady of Wichita, Kan., to be its new President. Brady believes in keeping out of politics.

The NAREB convention left the door open for a settlement by consent decree of the anti-trust action brought against it by the U. S. Dept. of Justice (Forum, Sept., '47). But NAREB's officers said they would plead "not guilty."

NEW HOUSING PLATFORM

Delegates to the 14th annual meeting of the National Association of Housing Officials (NAHO) went to work briskly last month to determine what to do about at least two principal issues: 1) housing for middle-income groups; and 2) planning for communities of millions of new homes likely to be built on new land within the next 12 years. The answers reflected not only the gravity of U. S. housing needs, but also a clearer notion of what can be done about them in the light of the current economic and political temper of the country.

First question on NAHO's agenda was: What makes 1947 building expensive? First answer by NYC Housing Authority's John P. Riley: probably not labor. Riley took issue with the fairly widespread opinion that labor is responsible for the major part of the rise in housebuilding costs. He said that cost of labor in New York public housing projects had risen from 39 per cent of the cost of the entire project to 61 per cent. Second answer (advanced by most delegates): Adequately—in the case of Salt Lake City it seems to be more than adequately (the Mormon church, happy owners of Utah, is building in Salt Lake City) has the city family group contrasts markedly with "the reproductive habits of the city family." This note of uneasiness, however, is offset by "the physical structure of such cities as Philadelphia and Baltimore" which is very well. Even the smaller cities, such as Lakewood, New Jersey, "are in that zone that it can do, Unanswered question: Who was to fill the no-man's-land between $9 and $16 rents?"

Nevertheless, the delegates decided to vote unanimously that NAHO should provide a sufficient volume of housing to insure necessary housing for those not provided for by private enterprises. The Taft-Ellender-Wagner bill, on the other hand, contains some "22,000 words, covering 112 pages, which no one can understand."

How to reach the middle-group people who are too rich to live in housing's $9 a room rental projects, too poor to pay private enterprise rents—troubled NAHO-NPHC delegates rest of the day. Said Charles Abrams: If private enterprise doesn't help these people after a real-time period, public housing should. Also Hovde: NPHC must support the group, or lose its support. Objector: "Let's get at the slum-dwellers first. Anyway, added Bauer and Bohn, private enterprise must be every possible chance to do the job that it can do. Unanswered question: Who was to fill the no-man's-land between $9 and $16 rents?"

In a menacingly titled section of its population check-up, "The Demo-Significance of the Growth of Metropolitan Districts," the U. S. Census bureau points out that people in modern large cities do not reproduce at a rate sufficient to maintain their numbers. Among cities reporting on the wane are New York, Chicago, Philadelphia.

The Bureau's companion observation is that the physical structure of such cities with few exceptions, ideal for destruction by A-bombs. This note of uneasiness contains the city group contrasts marked with "the reproductive habits of the people," who seem to be holding their very very well. Even the smaller cities, such as Salt Lake City, seem to be reproducing adequately—in the case of Salt Lake City, more than adequately (the Mormon index is 112 as against the average of 97). However, the rapid growth of the metropolitan districts—interrupted by depression of the 30's—seems likely to continue, the Census Bureau predicts, as long as the rural people move steadily into the nervous antihabitat of the great cities, leaving their abnormally reproductive habits behind them.
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(1st) Sheathes   (2nd) Insulates
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In this day of excessive construction costs, here at least is one place where you can tell a client "You get two uses for the money you spend."

Tests prove Insulite Sheathing provides bracing strength superior to ordinary wood sheathing horizontally applied. Its insulation value over wood is common knowledge.

Refer to Sweet's File, Architectural Section 10 a p 9

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A wise architect selected Lokweave carpeting for McCreery's striking new furniture floor because he knows it will stand up for years under heavy traffic. This modern type of carpet is installed without sewn seams—the sturdy, closely-woven loop pile is easy to clean—and it comes with "spare parts."

When a spot becomes soiled or damaged, the entire area can be replaced with pieces of carpet left over from the original installation. This amazing feature, plus the low cost of installation, makes Bigelow Lokweave the long-run economy carpet of all time. You will want to use it the next time you select new carpeting.

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Fine rugs and carpets since 1825
THE FINEST BUILDINGS OF THE POSTWAR
HAVE Q-FLOORS

Mercantile National Bank,
Dallas, Texas. Tallest office
building in the South. Architect—
Walter Ahlschlager, Dallas.
Contractor—Henger Construc-
tion, Dallas.

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surance Co., Boston, Mass.
Largest office building in New
England. Architect—Cran and
Ferguson, Boston. Contractor—
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L. Robertson, Wimpy, J. R.
Weber, N. Y. C. Contractor—
Rodney Miller, Miami.

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Largest all-metal commercial
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—Louis S. Weeks, N. Y. C.
(groups 1 & 2), Giffels &
Vallette, L. Rossetti, Detroit
(groups 3 & 4).

Waterman Steamship Build-
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Architect—J. Platt Roberts,
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World-Wide Building Service
SPACIOUS LAUNDRY ROOM, WITH SMOOTH, ATTRACTIVE PLYWOOD WALLS, CANVASED AND PAINTED.

RENOVATED BREAKFAST ROOM, WITH 5/8" PLYWOOD ON THE CEILING AND ON THE WALLS—THE LATTER WITH WALLPAPER APPLIED OVER A FELT BACKING.

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"...AS GOOD AS THE DAY THE JOB WAS COMPLETED"

THIS ATTRACTIVE REMODELING JOB WAS COMPLETED IN 1940—WITH DOUGLAS FIR PLYWOOD PLAYING A MAJOR ROLE IN THE WORK. ARCHITECT WHITNEY R. SMITH OF PASADENA, CALIFORNIA, SAYS: "DOUGLAS FIR PLYWOOD WAS SPECIFIED FOR RIGID SUBFLOORING, FOR CEILINGS, WALLS AND MANY INTERIOR DETAILS. THE ENTIRE BUILDING IS IN EXCELLENT CONDITION TODAY—AS GOOD AS THE DAY THE JOB WAS COMPLETED.

THE LAUNDRY ROOM, IN PARTICULAR, IS ALMOST A PERFECT TEST FOR PLYWOOD. DAMP LAUNDRY IS HUNG ON THE LINES AND WARM AIR FROM A FORCED AIR FURNACE IS BLOWN THROUGH THE ROOM. I HAVE SPECIFIED BOTH EXTERIOR-TYPE AND INTERIOR-TYPE PLYWOOD FOR MANY JOBS—AND IT HAS ALWAYS TURNED IN A FINE PERFORMANCE RECORD."

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DOUGLAS FIR PLYWOOD PRODUCTION IS GREATER NOW THAN IN PREWAR YEARS. TODAY'S DEMAND, HOWEVER, IS UNPRECEDENTED—AND RAW MATERIAL AVAILABILITY IS THE CONTROLLING FACTOR IN OBTAINING HIGHER OUTPUT. THIS UNEVEN DEMAND-SUPPLY RATIO NATURALLY MEANS THAT PLYWOOD MAY NOT ALWAYS BE READILY OBTAINABLE AT ANY GIVEN TIME AND PLACE. KEEP IN TOUCH WITH YOUR REGULAR SOURCE OF SUPPLY AS TO PRICE AND DELIVERY INFORMATION. FOR TECHNICAL DATA, WRITE THE DOUGLAS FIR PLYWOOD ASSOCIATION, TACOMA 2, WASHINGTON.
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ET IN MEMORIAM:

Forum:
Howard Myers dropped into my office in Chicago one day 15 years ago. There was a telephone, a drafting board, and me and my aspirations. I never knew why he came to see me—I hadn't done anything much—but I never forgot what he told me. In his subtle way he dissolved the practical problems facing me then, and after he left I felt Howard Myers had made me an architect. In the years that followed it was always Howard's opinions of my work that really counted to me—although I wouldn't dare tell him so. You couldn't even thank the guy—or get sentimental.

Today I feel lonely—because way down deep I've been working for Howard Myers these past fifteen years. I wanted all men to be like him and stand for the same things—and be my friend. Well, there just isn't another—and I guess I wouldn't believe it if there was.

If there were anyone else lost to the profession I could probably express my feelings in terms of the loss to the profession. But in Howard's case the loss is my loss—a deep hurting loss that's my special problem—even though I know I'm not alone...

WILLIAM L. PEREIRA, Architect
Los Angeles, Calif.

Forum:
... I received word of Howard's death just as I was about to speak in Spokane, Wash., and with that knowledge pounding in my head, I have never been up against a more difficult assignment. Like thousands of others everywhere, I not only respected but loved Howard Myers. No one in the architectural field, in public housing, or engaged in any of the social fields can fail to owe a deep debt to Howard. It was my good fortune to spend an afternoon with him just before leaving for the West and even though he had been desperately ill, I went away feeling that after all, in the great place of leadership, there was a person whose feet were planted firmly, and all of us whether engaged in private or public enterprise needed his wise counsel more than ever. While my feeling of personal loss was almost overwhelming, I believe that the average person has lost a champion who cannot be replaced.

LEE F. JOHNSON, Executive Vice Pres.
National Public Housing Conference
Washington, D. C.

Forum:
A friend has gone.
When I arrived in New York from Europe, one of my first telephone calls was for Howard Myers. The answer was, "Howard died just a short time ago."
Howard, to me, belonged to those straight spirits who saw the Arts in an honest way. He disliked snobbism. But his eyes smiled when he saw something being created without the use of force. He loved those who understood how to avoid foolishness and based their thinking on nature...
Howard Myers was always hoping and waiting for a new movement. But he, as well as the rest of us, was not patient enough. We expect such things to go fast. We forget that history goes slow. Speed is, in reality, nothing.

CARL MELLES, Sculptor
Bloomfield Hills, Mich.

Forum:
YOURS IS A WARMLY HUMAN TRIBUTE TO A MUCH LOVED PERSON. HOWARD MEYERS WAS A CITIZEN OF CIVILIZED WORLD YET TO COME.

PIETRO BELLUSCHI, Architect
Portland, Ore.

Forum:
... His tremendous humor, warmth, as well as his devotion to the modern architectural cause made their impact unforgettable. In the first few days that I landed in America, Howard gave me a sense of the universality of modern architecture, on that occasion when he managed to make the man from abroad, myself, feel among friends—the architects of the U.S.A. Since then, I have never hesitated to ask for his advice and was amazed at his capacity to spare apparently limitless time to all his innumerable friends in the profession.

SERGE CHERMAYEFF, President
Institute of Design
Chicago, Ill.

Forum:
Here was a life of many aspirations fulfilled as much as can be done below the clouds and in an earthly career.

RICHARD J. NEUTRA, Architect
Los Angeles, Calif.

Forum:
... It is not necessary for me to tell you how much the majority of architects admired Howard. Many of us have turned to him for advice, knowing that he would understand our problems and would give us unstintingly of his time and experienced judgment.

Your own description of the evolution of The Forum and of Howard's aims constitute an excellent tribute. But to me one of his outstanding characteristics is his realization of the greatness and native quality of our own American architecture. By publishing the best work that we have produced, he has shown to prospective clients, practicing architects and students tendencies and potentialities of contemporary architecture in this country, and he has proven the fact that modern work, like all historical expressions, is to some extent international; but it must also achieve national, and even regional characteristics if it is completely to fulfill its requirements. This Howard knew well, and he expressed his conviction by featuring the best work of our best contemporary designers. For this reason The Forum has become an important professional journal both at home and abroad.

With Howard's untimely death the architectural profession has lost a highly esteemed critic and supporter; the public at large has lost a strong and vocal advocate.

(Continued on page 24)
Mr. A. A. Raymond undertook the first Raymond "tough job" fifty years ago when he sought a sound pile foundation to supplant the relatively perishable wood piling which had been the standard for many years. The result of his persistent efforts was the Raymond Concrete Pile which now numbers in excess of two and one half million piles driven. This was the beginning of a long record of greatly diversified "tough jobs" successfully completed by the Raymond organization totaling more than 12,000 contracts.

SCOPE OF RAYMOND'S ACTIVITIES—includes every recognized type of pile foundation—concrete, composite, precast, steel, pipe and wood. Also caissons, underpinning, construction involving shore protection, shipbuilding facilities, harbor and river improvements and borings for soil investigation.

(BELOW)—Group of engineers inspecting the first Raymond Concrete Pile.

(LEFT)—Mr. A. A. Raymond (wearing derby) supervising the driving of the first Raymond Concrete Pile.

RAYMOND CONCRETE PILE COMPANY
Branch Offices in Principal Cities of the United States and Latin America
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The Architectural FORUM December 1947

This is no weather report ... simply a reference to the fact, Alaska weather is one of daily extremes. In January the thermometer will range from 56° F. above to 34° F. below ... and in July it may vary from a high of 92° F. to a low of 34° F. below zero.

Exposed building materials must resist the injurious effects of such erratic weather, so Anchorage, Alaska, for the first time is going to have SEAPORCEL Architectural Porcelain Enamel. The convincing reason is that it will withstand the rigors of 58 inches of snow ... or sudden chilling rains, concurrent with 92° F. above zero. Very few other finishes, if any, can surmount these rapid changes in temperature.

The architect's rendering depicted here illustrates a building 150 ft. long by 30 ft. high. The entire exterior facing is SEAPORCEL Porcelain Enamel in semi-matte white and rich red finish. Lighting is provided by neon tubing ingeniously silhouetting the letters against the facia panels.

 owners: Northern Commercial Company, Anchorage, Alaska
Gen. Contractor: C. W. Hufelman, Anchorage, Alaska

Sparkling ceramic fused to steel at 1550° F., SEAPORCEL can be fabricated to any shape, form, section ... finished in any shade or color and in many interesting textures.

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for better building: and many of us who knew and admired him have lost a true friend.

LEOPOLD ARNAUD
Dean
Columbia University
School of Architecture
New York, N. Y.

Forum:

... I whole-heartedly agree with your last line, "he saw it big." In my 30 years in America, it has been my privilege to be associated with some of the great professional and industrial leaders of our time. They also "saw it big." However, this was often accompanied by a certain ruthlessness or at best by a feeling of definite harshness.

Not Howard Myers. He "saw it big" too, and "he saw it kind."

RAYMOND LORRY, Designer

New York, N. Y.

Forum:

... Those of us who knew Howard can fully appreciate how he put his "heart" into his work. It was a privilege to have known him, and his life and work can well be an inspiration to all of us who have the opportunity to continue to build on the foundation he laid.

The world is surely a better place for his having lived in it!

LEON SHIMKIN, Publisher
Simon & Schuster, Inc.

New York, N. Y.

Forum:

I don't remember exactly when it started. Perhaps 15 years ago or so ... Howard was doing well a most important job, a job which implied some danger to him. For Howard was the first to publish modern buildings in an American architectural magazine. He was writing, encouraging others to write about what architecture is, about what buildings should do for people. Because he had the courage and the imagination to do this, the "old guard" was attacking him. Some were threatening to cancel subscriptions, others to withdraw advertisements, in short to try and ruin his magazine. But Howard knew that what he was trying to do was right, and that the magazine would grow. And it did grow—wonderfully.

... We served together on the Architects Advisory Committee to the FPHA. He was made chairman. What an able and likable architect's ambassador he was! He took such a natural pleasure in good things, well planned, well designed. One day I found him in his office, gay and excited. Some photographs had just arrived from California, showing the work of an unknown young architect. His joy was good to watch.

(Continued on page 26)
BENEKE
*CSC

Satin Skin

*Celluloid Sheet Covered

Very durable. Retains its soft white lustre for years.

BENEKE CORPORATION
Columbus, Mississippi, U.S.A. Offices in Principal Cities
easy, sure way to quality heating

specify Weir-Meyer equipment for all fuels

GAS

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for all installations—RESIDENTIAL COMMERCIAL INDUSTRIAL

There is dependable, fine-performing WEIR-MEYER heating equipment for every job. Write for literature and specifications.

Weir-Meyer means modern heat

LETTERS

and to share. Another time, in his apartment, with obvious fatherly pride he showed me some school drawings by his daughter. He made a wonderfully understanding and encouraging, yet critical, audience.

—William Lescaze, Architect

New York, N. Y.

Forum:

Any tribute must contain an obligation to maintain an attitude that we are sure would be Howard's were he beginning at the point where his work has ended.

It must be remembered that Howard Myers has won his battle. He has left a publishing world where by his efforts, modern architecture, is the rule not the exception.

Were he starting again I feel that he would not accept this accomplishment as a status quo, and if it were presented to him I believe he would be obliged to move against it. What action it would be we do not know—possibly the closest inspection and selection within modern architecture today, but certainly it would include the setting of keener standards of physical, esthetic, and social integrity.

—Charles Eames

Venice, Calif.

Forum:

. . . I have lost not only a friend but a guiding spirit.

—Francis X. Gia, Architect

New York, N. Y.

Forum:

. . . Of course, after the first terrible grief all of our thoughts flew to the idea of some wonderful and telling memorial—something a little more tangible than that which we all carry in our hearts for Howard. Actually, the magazine and its forceful continuation is the only real memorial Howard would have wanted. He was a great force in all our lives, and also the life of America. And I am sure that you will all see to it that the magazine continues as a powerful influence. Please do call on me at any time for anything I can do to help you and your confreres.

—Dorothy Liebes

San Francisco, Calif.

Forum:

. . . I am flying East (I was here in California when news of Howard's death reached me) and I dread coming into New York knowing that Howard will not be there. An hour with him was always a friendly oasis in a business day.

Aside from all personal feelings, I think...

(Continued on page 30)
ILLUSTRATED above, is Factory No. 1 of the American Gas Furnace Company, Elizabeth, N. J. It originally had wood siding, badly deteriorated through the years. Now, with Reynolds Lifetime Aluminum Clapboard Siding, it is bright and clean, has important extra protection against fire, and is definitely cooler in hot weather. Furthermore, it will have all these advantages permanently.

It is notable that other industrial and commercial orders for Reynolds Lifetime Aluminum Clapboard Siding keep coming in from the Elizabeth area, directly following the above installation. In addition, the American Gas Furnace Company is roofing another of its plants with Reynolds Lifetime Aluminum "Snap-Seal" Roofing. As is always true with a superior product, one sale makes another and another.

Dealers who promote one installation of this siding will find they have started an endless chain of profits. Builders and architects who specify it will enhance their reputation for being up to date and value-conscious. See Sweet's or write for detailed A. I. A. file brochure.

Reynolds Metals Company, Building Products Division, Louisville 1, Ky.
YOU’LL save money and space for your clients when you combine two great wall systems... the Gold Bond Hollow Wall and the Gold Bond 2 inch Solid Partition.

1. The GOLD BOND TWO-INCH SOLID PARTITION with flush type metal base saves up to 7% of the living or working space wasted by old-type thick walls. And with no loss of sound reduction or crack resistance, this metal lath and gypsum plaster partition also means less weight and faster construction. Now, what about walls that must provide for piping and ducts?

2. That's where the GOLD BOND HOLLOW WALL SYSTEM comes in. This system employs the use of two separate units which may be spaced any distance apart to meet specifications for pipes, etc., with no ties or bridging. The illustration above shows the Two-Inch Solid Partition used in combination with the Hollow Wall system to meet all job conditions. (Wood nailing supports for the fixtures are wired to the channels.)

Combine two good ideas and you get a better idea... and at no higher cost! You'll find Gold Bond Partition Systems listed in detail in our section of Sweet's, or write for descriptive catalogs.

You'll build or remodel better with Gold Bond

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Over 150 Gold Bond Products including gypsum lath, plaster, lime, wallboards, gypsum sheathing, rock wool insulation, metal lath products and partition systems, wall paint and acoustical materials.

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1. What's the INSIDE Story?
Modine's controlled brazing process results in one piece, integrated coil construction, eliminating all weak spots. With no screwed or expanded joints, no gaskets or bolts—you get greater strengths, longer life, better performance!

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These functionally designed, streamlined Modines are easy on the eyes—and ears too! Their heavy-duty, totally enclosed motors are noise-proofed for hush-hush service, certified for quietness by laboratory sound ratings.

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Forget about expensive supports, extra labor costs with Modine. Patented center supply and return connections mean unit can be suspended directly from supply line with complete safety—installation savings up to $10 per unit.

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You get uniform temperatures precisely controllable for perfect comfort, low cost, because Modines give you flexible heat delivery. Like light, you can beam, flood or gently diffuse heated air where and when you want it.

M-O-D-I-N-E spells the Best in Unit Heating
47 basic Modine capacities mean the right unit for any application. Horizontal Delivery Types for general industrial applications. Vertical Delivery Types for overhead installation. Power Throw Types for special high-velocity use. Buy Modine and you buy the quality unit heater—first in beauty and performance. Write for complete information, send in coupon at right.
LETTERS

you will agree that architects, until recently, have not been too receptive to the industrial designer—and yet years ago Howard, with a completely open mind, had “taken us in;” and don’t think we did not appreciate his understanding.

Henry Dreyfuss, Industrial Designer
New York, N. Y.

Forum:

... I think Howard would like your tribute. It is as simple, offhand and effective as he himself always was, I find that only a great gap fills my mind when I try to say anything about him. All words seem thin and tired and his presence still has so much reality that I cannot speak as though he no longer existed.

Alvin Lustig, Designer
Beverly Hills, Calif.

Forum:

... No man could write his epitaph. We feel this way, because, after spending a wonderful evening with him a month ago, we went away knowing we had met a man unique in his field ... Immediately he made us, from far off Texas, feel perfectly at home and at ease. We deem it a cherished pleasure to have known him.

Mackie & Kamrath, Architects
Houston, Tex.

LETTER FROM CZECHOSLOVAKIA

Forum:

Czechoslovakia, in the heart of Central Europe, was the first country to be swallowed by Hitler in 1939, and, due to the tragic circumstances of the war, the last country to be liberated from the German yoke by the American and Russian armies. Thus it is the country which suffered, if not worst, at least longest under the German occupation. War damage was worst in the Eastern provinces Slovakia and Moravia, Bohemia remaining almost untouched.

The “Third Republic,” as the present regime, which was created in 1945, is called, has taken upon itself a tremendous economic burden, which presses heavily upon the Czech economy, and thus upon building also. About 70% of the industry of the country has been nationalized, i.e. taken over by the Government. Heavy industry, banks, insurance companies and all larger enterprises are now called “Narodni Podnik,” which means “people’s enterprises.”

From this country, where once lived Czechs, Slovaks, Germans, Hungarians, Poles and Jews, the Government removed all minorities. One of the gravest postwar problems of Czechoslovakia is how to replenish the vacuum created in this way.

(Continued on page 34)
PENBERTHY AUTOMATIC
ELECTRIC SUMP PUMPS

CONSTRUCTED OF COPPER and BRONZE THROUGHOUT

MODEL 46
MODEL M
Made for 5 Different
Sump Depths

MODEL 45

PENBERTHY INJECTOR COMPANY

Canadian Plant—Windsor, Ont. (Manufacturers of Quality Products Since 1886) DETROIT 2, MICH.
Here is the ideal year-round

SERVEL ALL-YEAR GAS
SEASON COMFORT, PROM

The home of Architect Otto Woestemeyer, 2321 Claremont Ave., Houston, Texas, features the year-round comfort of Servel All-Year Gas Air Conditioning. Mr. Woestemeyer says, "The summer cooling provided by Servel is most welcome in this warm, moist climate. The air filtering qualities of Servel are superb. Operating costs have been amazingly low."

"We are entirely satisfied with the performance of our Servel," writes Gordon Brown, 4519 Firestone Blvd., South Gate, California. "The comfortable condition of our building is complimented by everyone and is the delight of our employees."

Customers and employees alike appreciate the comfortable temperature and humidity that Servel All-Year Gas Air Conditioning maintains the year round in Silverstein's Women's Store, 342-344 DeSiard Street, Monroe, Louisiana.
you're on safe ground when you recommend Servel All-Year Gas Air Conditioning. Hundreds of installations are operating successfully from coast to coast. And users everywhere are enthusiastic.

Home owners praise the just-right temperatures, the dehumidified, dust-free indoor climate provided by Servel through every season. Business and professional men report in employee health and efficiency, reduced absenteeism. Merchants tell of increased patronage, higher sales volume. I agree that the benefits of Servel All-Year Gas Air Conditioning will more than pay for it in a short time.

One Unit Does Year-round Job

The reason for this tremendous success is that the Servel conditioner is completely different from any other air conditioning unit. Servel is a complete air conditioning system in one unit, operating through scientifically designed ducts and registers. In summer, Servel refrigerates and dehumidifies air. In winter, Servel heats and humidifies it. Servel also filters out dust, dirt and irritating pollen.

Whenever you are planning new construction that would benefit from the advantages of Servel All-Year Gas Air conditioning, be sure to tell your clients about it. For additional testimony about specific applications, get in touch with your local Gas Company. Or write to Servel, Inc., 712 Morton Avenue, Evansville 20, Indiana.

TRIED, PROVED, SUCCESSFUL
(From Boston to San Diego . . . From Bismarck to Miami)

The Servel All-Year Gas Air Conditioner is already operating successfully in hundreds of installations from coast to coast. Some have been running for more than seven years. The equipment is tried, tested . . . and approved by users everywhere.
KOVEN WATERFILM BOILERS

The heating dollar goes further with a KOVEN WATERFILM BOILER... because WATERFILM'S fast-steaming, fuel-saving features can be relied upon for years of efficient performance.

Whether you recommend WATERFILM for small homes, apartment houses or industrial plants, the effectiveness of this outstanding boiler is assured. Its patented construction, incorporating all the latest scientific improvements that cannot be duplicated by any other boiler, provides even temperatures in every room and an abundant supply of domestic hot water at all times.

The modern, high-styled jackets enclosing WATERFILM Boilers make them attractive to the many home-owners who demand a heating unit that will not only serve well, but look well. Made for automatic firing with oil, stoker or gas. Write today for a free copy of the illustrated booklet which gives complete details.

A special Rehabilitation Department has the difficult task of refilling the empty border territories (Sudetenland, etc.) as well as trying to settle the imported workers from Italy and Bulgaria... Without the qualified workers whose craft has been handed down from generation to generation, the revival of industry is hardly to be considered.

On January 1st, 1947, a two-year plan was solemnly inaugurated, to be followed later by a five-year plan. All planning in Czechoslovakia must be coordinated with this two-year plan of the Gottwald Government, which not only provides for the repair of war damage and the restoration of buildings to their original condition, but takes it upon itself to make fundamental improvements in buildings, districts and even whole communities. Preparations for reconstruction are on a broad scale. A general raising of the building standards is considered. More than 220,000 houses destroyed or damaged must be restored. In order to satisfy the most urgent demand for housing it will be necessary, according to the program, to build or restore 125,000 apartments. As in all war damaged countries it is very difficult to achieve the necessary speed of reconstruction.

Utmost economy is the first demand. It is a necessity which is called 'Socialist Realism'. The 'Socialist Realism' in Czechoslovakia is a sober economic point of view without a Moscow coloring. The slogan has a different meaning in every country. For instance, in Russia it serves as cover for any cheap and shoddy trash. In general it would be a good thing if Czech and Russian architects would cooperate, but so far they have not and there is still too great a cultural difference between them.

No matter how ideally the two-year plan may have been conceived, those industries which are compelled to provide living quarters for their workers have to adhere to very tight minimum standards for this housing—much tighter than the minimum standards for living space set up by "BAPS," the central architectural committee.

In Czechoslovakia all architectural associations are combined in a central organization which is called "block of progressive societies," initials BAPS, and which has far reaching influence. No competition can be held without the permission of "BAPS." "BAPS" does not permit changes to be made in a building, even after years, by any architect other than the original designer. "BAPS" fights successfully for the position of the architect in the new planned economy and it fights against trash and shoddy

(Continued on page 38)
Specify the screening that's easiest to handle

8 Big Advantages
- Permanent — can't rust
- No upkeep — never needs painting
- No bleed — cannot stain house
- Easier installation — handles like cloth, cuts with scissors
- Safer installation — no jagged edges
- Greater impact strength — takes abuse
- Lightweight — one-fifth the weight of metal
- Tinted — to blend with any color scheme

Firestone Velon

TINTED SCREENING

Velon is a welcome revelation to anyone who has to handle screening. It works like cloth, cuts quickly with an ordinary scissors, can be installed easily at great saving in time and temper. When working with Velon there's no hazard of jagged edges ... anyone can handle it with ease. These are only two of Velon’s many advantages — yet it costs less than good metal screening. Available in all standard widths. Write now for full information on Velon screening to Firestone, Akron, O.
More than 1,500,000 Briggs Beautyware porcelain enameled, steel plumbing fixtures have been produced since 1933. These modern smartly designed, long life plumbing fixtures are still giving the same satisfactory service as the day they were installed. This confirms what Briggs engineers determined 14 years ago... that much useless weight could be eliminated and still make a superior fixture. Result: the finest in plumbing ware.

The demand for Briggs Beautyware now is greater than ever. The architect, plumbing dealer, the builder and consumer all are aware that Briggs Beautyware has the high quality and extra value that the modern home owner must have.

Briggs bath tubs are styled for the modern home... durable, neat, modern and safe. Yes, Briggs has those much in demand features and extra values that make money for you. Briggs' exclusive safety bottom makes sit-down and shower bathing safe. Flat bottom for more and safer bathing area... stainproof (acid resisting) porcelain enamel—so easy to clean, at no extra cost. Integral lip flange—a permanent seal tub to walls... so important to architect, plumbing contractor and builder.

No wonder Briggs Beautyware today is the modern name for plumbing ware. No wonder Briggs plumbing ware dealers are so enthusiastic—so sold on Briggs Beautyware. Write for complete details today.

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Engineered by Westinghouse

Win the women with your Industry-Engineered Houses and you are on the road to profits. You can be sure of sparkling details that captivate women with Westinghouse engineering.

In the kitchens, for instance, where the sale must be made, Westinghouse offers tested design... plans that have demonstrated appeal... that you can install at surprisingly low cost.

All through the house the same careful attention to electrical details that add buying appeal has been given by Westinghouse specialists. We wrapped the whole story in a book. It gives wiring diagrams, kitchen layouts, product information. It's free.

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Planning Your Kitchen Electrically. The most practical kitchen planning book available. $1.00...

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That's why Reynolds Aluminum is a better buy

- Figure it out for yourself! Aluminum is \( \frac{1}{4} \) the weight of steel. That's why ... pound for pound ... it gives 3 times the working area of conventional materials. So, check the price of the duct metal that you are using. Compare it with the cost of Reynolds Aluminum Utility Sheet. You'll find that you can't afford not to use aluminum.

And that's just the beginning. This lightweight Reynolds Aluminum Utility Sheet saves you time and money both in shop fabrication and erecting on the job. What's more you deliver a finished installation of highest quality. Aluminum ducts require no paint, look better, are rust-proof and corrosion resistant and assure greater heating efficiency with quieter operation.

For complete information on Reynolds Aluminum Utility Sheet for ducts contact your nearest jobber, Reynolds Sales Office or write direct to Reynolds Metals Company, Aluminum Division, 2528 South Third Street, Louisville 1, Kentucky.

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BERNE, INDIANA
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227 E. 56 St., NEW YORK 22, N. Y.

The first great architectural event in postwar Czechoslovakia was a competition for workers' housing arranged by the Czech Steel Works at Most in northern Bohemia. The program calls for living quarters to be coordinated into an extended strip settlement for about 30,000 inhabitants. The chief interest is concentrated in the 11-story apartment building for collective living. It (Continued on page 42)
Have you heard?

—hundreds of low-cost homes are being rushed to completion with

CHASE COPPER TUBE
FOR WASTE AND VENT LINES

Readily available!

Here's a typical application of Chase copper waste and vent lines—the second floor bathroom of one of the hundreds of homes now under construction by Levitt and Sons, Incorporated, Long Island, N. Y.

Remember, there's no shortage here! For full information about Chase Copper Tube, write Dept. AFI27.

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SUBSIDIARY OF KENNECOTT COPPER CORPORATION

This is the Chase Network...the easiest way to buy brass

ALBANY, ATLANTA, BALTIMORE, BOSTON, CHICAGO, CINCINNATI, CLEVELAND, DETROIT, HOUSTON, INDIANAPOLIS, KANSAS CITY, MO., LOS ANGELES, MILWAUKEE, MINNEAPOLIS, NEWARK, NEW ORLEANS, NEW YORK, PHILADELPHIA, PITTSBURGH, PROVIDENCE, ROCHESTER, SAN FRANCISCO, SEATTLE, ST. LOUIS, WASHINGTON.

(Telephone Sales Office Only)
Here's how FRIGIDAIRE meets today's demand for greatest utility in smallest space!

Frigidaire RJ-3 Electric Range, only 21" wide, virtually same cooking and baking capacity as standard size. Full-size twin-unit oven, high-speed broiler, 5-speed Radiantube Surface Units, all-porcelain finish, stainless steel cooking top.

Frigidaire "Table-Top" Electric Water Heater, only 21" wide. Designed especially for kitchen or utility room installation. Entirely automatic, Lifetime Porcelain finish, welded steel tank, Radiantube Heating Unit, shaped to flex off scale deposit.

Frigidaire all-steel, double-bowl Cabinet Sink, 48" wide. All-porcelain, sliding drain board and porcelain top. Sturdy hinges, quiet drawer slides, mixer faucet, finger-tip spray, cutting board, rust-proof soap rack, towel bar, chromium crumb-cup.

Frigidaire's new "Compact-Six" Refrigerator, only 49" wide, 6-footer. Holds nearly 50% more usable storage space than conventional refrigerators requiring the same floor area.

Architects! Builders! Use these compactly designed Frigidaire appliances to take full and profitable advantage of today's demand for greatest utility in smallest space.

See your Frigidaire Dealer! Find name in Classified Telephone Directory. Or write Frigidaire Division, General Motors Corporation, 1210 Amelia St., Dayton 1, Ohio. Leaside 12, Ontario.

Frigidaire makes four most-needed kitchen appliances to fit into only 9½ feet of wall space.

You're twice as sure with two great names

Frigidaire made only by General Motors
When you need a practical working surface that must combine beauty with durability and convenience, be sure to specify Decorative Micarta. Only then will you get all 10 of these important advantages:

1. Won't scratch or mar under ordinary service conditions. Finished surface is hard and durable.

2. Strong, dense material. Guaranteed not to warp, chip or crack under ordinary service conditions.

3. Genuine wood veneers available. Truwood Micarta combines the beauty of such woods as primavera, mahogany and walnut with all the practical features of Decorative Micarta.

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5. Available in "cigarette-proof" grade at slight extra cost. Even when cigarettes burn out on it, "cigarette-proof" Decorative Micarta remains unmarred.

6. Will not spot or stain from spilled food, grease, alcohol, etc. Highly resistant to heat, moisture, mild acids and alkalies.

7. Color-fast, permanent finish. Unusually clear, lustrous colors and patterns won't fade or darken.

8. Exclusive "Beauty Mask" of tough Kraft paper protects surface during shipping, machining and installation. Strips off easily when ready for use.


10. Large 4 ft. by 8 ft. sheets of Decorative Micarta are available for covering large surfaces quickly, and with a minimum of joints. Smaller sizes also available for table tops and similar applications.

Get complete information on Decorative Micarta. It's the tops! Just the right color and pattern is available now for your interiors. Write:

UNITED STATES PLYWOOD CORPORATION
New York 18, N.Y.
hungry fungi were harnessed to provide these NDMA STANDARDS

No pains were spared by NDMA in developing reliable tests of toxic preservatives for millwork such as doors, screens, and windows. Hungry fungi—more virulent than are ever likely to be encountered under actual service conditions—were pitted against treated and untreated wood. Wood samples were buried in swamps—subjected unpainted to violent weather conditions...

Out of these tests—out of consultations by eminent scientists—came the six important steps which help to make wood a better building material than ever... supplementing its natural lasting qualities through reliable measurements of toxic treatment efficiency. Here is what NDMA has done—and is doing—to serve the public and you:

1. An efficient test for measuring effectiveness of toxic preservatives.
2. Minimum standards governing the toxic preservative treating of woodwork products.
3. A seal identifying products treated in conformity with NDMA Toxic Preservative Standards.
5. Laboratory check tests of preservative solutions.
6. Educational effort in the public interest.

NATIONAL DOOR MANUFACTURERS ASSOCIATION
McCORMICK BUILDING • CHICAGO, ILLINOIS

is to be completed in 1947. The program includes a twin block for 800 inhabitants.

What does collective living mean? It means living with a community. Living collectively is the compression of living units—i.e., apartments and dormitories, into a large block which is administered like a hotel from a central office and in which both men and women are freed of the housework by a carefully considered service system. The women especially gain because it is possible for a working help service to take care of all those time-consuming daily tasks which are indispensable to living. In a limited measure such service is already familiar to us in the electricity supply, water supply and district heating. In principle the tenant is offered all the comfort of a household with two servants. Cleaning, dusting, window cleaning, shopping and food preparation are all taken care of by the service. In addition extra living space is available in the way of rooms that may be rented for family gatherings, private dinners, club meetings, sports and hobbies.

As an answer to the question whether the individual culture of living does not suffer, it is asserted that rented rooms are only used temporarily, that living in a hotel is no different, and that people who decide to live in a collective house have a certain amount of collective spirit, which makes it easier for them to sacrifice individuality for a simplified life.

If common living under one roof becomes something more than being thrown together by chance as in a hotel and if there is a common philosophical ideal to act as a unifying factor, a new sociological concept arises. This concept is used by the Czech magazine "Architektura" whenever the question of the collective house—in Czech "Koldum"—is discussed.

No matter how carefully the architects have thought out the "Koldum," the workers look at it with suspicion. Their ideal continues to be the detached small house with a garden and rabbits, all surrounded by the highest possible hedge. "Your wish is our command" says the works administration, and makes only careful advances with the collective houses. The new ways of life are not being determined at green or red tables. This model form of living cannot even now be ordered by decree, but can be made popular only slowly by a few well-thought-out examples. The proportion of people who favor the "Koldum" in comparison with traditional living is estimated at about one in ten. It is believed that such basic changes in the so far private lives of the working population of Most can be made only in careful doses.

The same restraint in the propaganda for (Continued on page 46)
INGERSOLL UTILITY UNITS
Installed in 211 Cities During 1947

Proved Practical, Economical, Convenient
in Homes All Over the Country...

Architects and Builders Enthusiastic
Over Time and Space-Saving Advantages

A little over a year ago The Ingersoll Utility Unit was in the experimental stage, new and untried. Now in thousands of homes, it has proved itself for convenience, economy, adaptability. Architects and builders everywhere, thoroughly convinced by its practical, flexible performance, are specifying it for single home construction and in projects up to 1000 and more dwellings.

The Ingersoll Utility Unit is adaptable to a wide variety of individual plans and needs. It is compact, requires less than 80 square feet of floor space, and provides more living space for less money.

Complete, it eliminates time-consuming specifications—everything comes with one purchase, from one source, right when it's needed. It cuts building time from three to four weeks and can be installed before, during or after construction of building framework.
He changed "Watertown" to "Timken Town"

All Automatic oil burners installed in Jefferson County, N. Y., have to pass a state electric inspection. So says the law that went into effect in February, 1947.

And here's what Jefferson County records say: Timken Dealer C. A. Burkhard, Watertown, N. Y., has installed more Timken Silent Automatic Oil Burners since that date than the total of all other makes combined.

And thereby hangs a tale.

Burkhard took the Timken franchise in 1936—did a steadily increasing business in the next few years—sold 41 Timkens in 1941, last full year of prewar production.

But here's his record since that time: 1946—126 Timkens installed; first four months of 1947—74 Timkens installed!

"I wish I could say it was all due to good selling on my part," writes Timkeneer Burkhard, "but it wasn't. Satisfied users and public acceptance of Timken have been principally responsible for making Watertown another Timken Town."

That's the way it goes, wherever a Timken is installed. Neighbor follows neighbor—neighborhood follows neighborhood—until entire communities know the comfort, convenience and economy of Timken Oil Heat.

The steadily growing public preference for Timken is based on one thing: Homeowners are convinced that Timken quality is the best possible buy.

And the value of the Timken Dealership Franchise grows, as town after town becomes a Timken Town.

The Royal Family of Oil Heating

Timken Silent Automatic Oil Heat

"I wish I could say it was all due to good selling on my part," writes Timkeneer Burkhard, "but it wasn't. Satisfied users and public acceptance of Timken have been principally responsible for making Watertown another Timken Town."

That's the way it goes, wherever a Timken is installed. Neighbor follows neighbor—neighborhood follows neighborhood—until entire communities know the comfort, convenience and economy of Timken Oil Heat.

The steadily growing public preference for Timken is based on one thing: Homeowners are convinced that Timken quality is the best possible buy.

And the value of the Timken Dealership Franchise grows, as town after town becomes a Timken Town.

The Royal Family of Oil Heating
prevent THIS loss
with

the great advance in wood preservation

You can prevent the costly destruction of wood by decay and termites with a treatment that leaves wood clean. Wood properly treated with Pentachlorophenol builds for permanence, yet it is easy to handle, non-bleeding, paintable. This great advance in wood preservation makes lumber even more widely useful than before—helps you cut building and maintenance costs!

Impartial ten-year tests have established the lasting effectiveness of this modern treatment. Pentachlorophenol protects even under severe service conditions, such as high humidity and actual ground contact. Its cleanliness makes it useful indoors or out.

For application to wood at low concentrations in petroleum oils by established pressure and non-pressure treating methods, Pentachlorophenol is available now.

See How to Cut Building Upkeep Costs!

Send for this new free booklet today. It tells how Pentachlorophenol adds years to building life. Ask for Bulletin No. PE-29.

THE DOW CHEMICAL COMPANY • MIDLAND, MICHIGAN
modern living can be found in the housing schemes of the other nationalized industries. The textile industry, which is passing through a stage of complete regeneration, is planning garden cities the largest of which is to house 3,000 workers—according to the Uthwatt report in England, cannot be considered. Furthermore the suggestions of the Uthwatt report, which have been such great service to modern urbanism, are unknown in Czechoslovakia.

On the question of single versus multi-story building the magazine “Architektura” writes: “We are of the opinion, and shall defend our point of view in the future, that families with children should not live above the second floor.” This principle is adhered to elsewhere. How could it happen that the “Koldum” was planned with eleven stories? In collective living on the Czech plan children are taken care of in a nursery which is in the middle of the same building. The “Koldum” project for the Steel Works put this nursery, which is divided off according to the parents’ apartment for teaching, eating, sleeping and studying—not too far away: that was one of the conditions made by the administration of the Steel Works. This principle is defended by the English boarding school system. Large athletic fields and facilities complete the collective house.

In considering the pros and cons of collective living it must be stated that living standards show a steady development and that a standard once achieved has never been sacrificed except under duress. Living has always made use of all progress and inventions, despite the events of time. There is very little doubt on which side collective living stands in the age-old conflict between progress and conservatism.

K. K. Perlsay, Architect
Prague, Czechoslovakia

RATE-OF-RISE

Of late I have noted a tendency toward greater recognition of devices pertaining to fire protection, which is indeed gratifying as in years gone by it seems there has been...
Thousands who are planning new homes know about it!

Hot Water
“Packaged-in-Glass”

WHEN YOU SPECIFY “PERMAGLAS” they know you are recommending cleaner, purer hot water free of all tank rust and corrosion.

THE TANK LINING of the Permaglas Water Heater, an original A. O. Smith discovery and development, is glass-fused-to-steel. It CANNOT rust or corrode under ANY water condition!

This great feature alone makes “Permaglas” the nation’s best water-heater buy . . . and the best you can specify for the completely satisfactory house.

Thousands of people in your community know it, because the most sustained national advertising program ever devoted to a water heater is informing them ... in the popular magazines that all home-planners read and study.

Send the coupon for complete specifications, today!

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Without obligation, send specifications on the following SMITHway Water Heaters.

☐ Gas Water Heaters
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New York 17 • Atlanta 3 • Chicago 2 • Houston 2 • Seattle 1 • Los Angeles 14 • International Division: Milwaukee 1 • Licensee in Canada: John Inglis Co., Ltd.

Manufacturers also of quality zinc-lined Duraclad and Milwaukee models
Curved panels of Insulux Glass Block bring daylight with privacy to tenants of eight-story apartment building. Architect: Berla & Abel, Washington, D.C.

Here's enlightened living for city dwellers!

No need for apartment houses to be dark and dreary places... let Insulux Block light the way!

Versatile Insulux combines a graceful design in modern buildings with the functionality to insulate against summer heat and winter cold.

Insulux permits new flexibility and originality in architectural planning and execution and is ideal for bringing light deeper into rooms and for spreading daylight over wider interior spaces. Wherever daylight with privacy is desired, there's a place for Insulux!

Widely used by many outstanding architects for residences, apartments and commercial establishments, Insulux Glass Block is installed in a manner similar to brick. Once in place, panels are permanent, require no paint, will not rot, rust or corrode.

For complete technical data, specifications and installation details, see the "Glass & Insulux" section of Sweet's Architectural Catalog, or Dept. D-24, Owens-Illinois Glass Co., Insulux Products Division, Toledo 1, Ohio.

Bright, modern living room shows how Insulux Glass brings daylight far into living room; relieves corner dark. Occasional washing is only maintenance required by Insulux.
why the trend to

RUBBER TILE?

THERE IS A STRONG and growing demand for rubber tile, and no wonder. For here is a modern floor that offers superb decorative advantages in combination with "you-can't-wear-it-out" durability. And DANBURY RUBBER TILE includes these important features:

DISTINCTIVE COLORS that can be woven into an endless variety of floor patterns.

MARBLEIZATION that goes all the way through to the back of the tile — a homogeneous material.

DURABILITY that makes the first expense of installation practically the last expense.

QUIET AND COMFORTABLE, because rubber tile hushes impact, and its give reduces fatigue.

HIGH GLOSS FINISH that pleases the eye with its muted overtones of reflected light.

EASY TO MAINTAIN and to keep refreshingly new and bright.

Danbury's research in rubber chemistry, its exhaustive testing and quality control are directed toward a single objective — to assure you of rubber flooring that provides enduring evidence of careful planning. Danbury's experience and research are supported by modern, newly equipped and expanded production facilities. For a quiet, comfortable, colorful and durable floor that is easy to maintain, specify — DANBURY RUBBER TILE.

SEND FOR THE NEW DANBURY CATALOG SHOWING 23 OF OUR COLORS AND A SELECTION OF NEW ARCHITECTS PATTERNS.

NOW MAKING 30 BEAUTIFUL COLORS IN 7/16" AND 3/16".
For the second time the Architectural Forum has the honor to announce an entire issue devoted to the new and unpublished work of Frank Lloyd Wright.
How Conduit System saves space. One small-diameter conduit for air and pipes for refrigerated or heated water takes only 25 per cent as much space as ordinary supply and return ducts. Elimination of ceiling ducts saves still more space.

It's always fair weather for all tenants

A particular office may get cool morning shade, hot afternoon sun. But tenants in the Durham Life Insurance Building, Raleigh, N. C., can be comfortable all day long every day in the year. Carrier’s remarkable Conduit Weathermaster System of air conditioning permits any office to have the kind of “weather” the occupants like.

This year-round Carrier system has proved its worth in many leading office buildings, hotels, hospitals and other multi-story structures. Using small-diameter vertical conduit instead of bulky ducts, it often saves enough space on a floor for an extra rentable room. And, since normally no ceiling ducts are needed, it is sometimes possible to plan an extra floor without increasing the new building’s over-all height.

The Conduit Weathermaster System can be applied to both old and new building installations. Its many other advantages are described in the booklet, “Carrier Conduit Weathermaster System.” Write for your free copy today.

Carrier engineers—who created the Conduit Weathermaster System—have worked closely with architects and their consulting engineers for years. Their world-wide experience is your assurance of efficient, dependable air conditioning. Carrier Corporation, Syracuse, New York.

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air conditioning
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LEH

ears...

• No disfiguring rust streaking on sills or side walls, even after four years—Lumite can't rust or corrode! And that's just one of Lumite's many points of superiority, just one of the reasons why it pays to specify Lumite screen for every home. This wonderful material side-tracks almost every common screen trouble, builds good will every time it's installed. Here's why:

PROVEN DURABILITY. In recent tests by an outside engineering organization, no other type of screening commercially available showed up as well as the material from which LUMITE is woven (Dow's Saran). It was the only one to earn top rating in every category—from immersion in salt water to accelerated weathering and exposure in a tropical chamber.

STRONGER BY TEST. A 5-pound steel weight dropping on a framed LUMITE screen couldn't dent it in 42,300 blows. With filament diameter of .015", lumite has greater impact strength than metal!

NEVER NEEDS PAINTING. LUMITE requires no painting or protective coating of any kind. Will not "rust out"—will never change color. Keeps its "sheen"; stays clean.

SPECIFY LUMITE SCREENING FOR YOUR CLIENTS Sold through Hardware and Lumber Dealers and Screen Manufacturers

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LUMITE QUALITY INSECT SCREEN CLOTH Registered Trademark

a general laxity towards publicity for fire prevention. As you undoubtedly are aware, our country is experiencing a tremendous fire loss, and fire prevention should therefore be constantly before the public.

I wish to take this opportunity to commend you on your fine article in the July, 1947 FORUM, in which you outline the experiments that have been conducted by the Otis Elevator, Westinghouse, and Grin­nell Companies on the protection of floor openings. In the September issue further reference has been made to this form of protection and it also shows illustrations of the escalator installation in the Kresge Department Store of Newark, N. J.

However, in this article you speak of the actuation of the motor driven shutters by thermostats and I wish to make a correction in this respect. We were instrumental in making that part of this installation and it is our ATMO Automatic Fire Alarm System that actuates the motor driven shutter. This takes place through a rate-of-rise system wherein operation is produced through a rate-of-rise of temperature, rather than a fixed temperature basis, which thermostats would normally indicate to the average reader. Our system when installed will operate when there is continued abnormal rise in temperature of approximately 3° per minute. The system compensates for any gradual change in temperature and is thereby safeguarded against false alarms.

CHARLES M. BLAES, Mgr. J. H. Scharff, Inc.
Orange, N. J.

Forum:

Since we bought our house over 25 years ago (the owner took a year to build it and it is just a 3-story tapetistry brick, 6-bedroom house, costing $30,000) I have wanted a house similar to the type that Stanwood Phillips (Fifth Avenue) builds—only in this climate where we have rainfall, have roofs (that look like roofs) and have houses that look like houses.

My father came from England where his country house (I never liked the Georgian town house) gives me a nostalgia for roofs and rock gardens and gates. Why are so many American houses so severe in line? Why isn't it possible to have streamlined kitchens and baths and yet have a house that looks as if it melts into the landscpae?

AUGUSTA PARKER WOOSTER
Atlantic City, N. J.

Maybe we Americans just don't like that fenced-in feeling, but we have some roofs and gardens this issue (see HOUSES pp. 93-104)

—Ed.
Known by name... Everywhere

Church Seats

"The best seat in the house"

Public recognition is the greatest sales advantage a product can have. Church Seats possess it to a degree equaled by few products on the market today. Because Church Seats are known by name everywhere, it becomes only a question of which Church Seat. The public recognizes but one standard of seat quality—Church.

C. F. Church Mfg. Co.
Holyoke, Mass.

Specify Church Seats by name
Neolay

AMERICA'S FINEST

Aluminum

Cables

by the Wire and Cable Department
UNITED STATES RUBBER COMPANY

New insulated aluminum conductors—pioneered by "U. S."—are here and here to stay! Because they're as much as 50% lighter than ordinary cables. Economical to buy and install. Neoprene cover is tough, abrasion resistant—also resistant to oil, fire, and cold. Write for new 32-page brochure describing all types and sizes of "U. S." aluminum wires and cables. Address Wire and Cable Department, United States Rubber Company, 1230 Avenue of the Americas, New York 20, N. Y.
Architectural Beauty . . . With Modern Free Light and Air

The Truscon Planning Board Says: "Normal delivery on many of our Steel Building Products is now possible. In fact, on all material for which raw material is readily available, a normal rate of production and delivery is currently in effect." However, since production and delivery schedules change from week to week, we suggest you contact the nearest Truscon Sales office for the latest information.

Free Light and Air . . . With Modern Architectural Beauty

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Now... A Complete New Line of NATIONAL Commercial STEEL BOILERS

Designed and engineered for the largest heating jobs where extra heating capacity and economical operation are prime considerations. National Commercial Steel Boilers are available in 16 sizes with SBI net ratings ranging from 2,500 to 35,000 square feet of steam radiation—these standardized sizes complying with Standard Practice Recommendation R157-37 of the United States Department of Commerce.

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Check these features:

LONG, TROUBLE-FREE SERVICE from durable flange quality steel construction and Electrunite tubes. Design and construction meet or exceed the requirements of the Steel Boiler Institute Rating Code, and the American Society of Mechanical Engineers Boiler Construction Code. Each boiler is inspected and approved by a representative of The Hartford Steam Boiler Inspection and Insurance Company. Generous firebox proportions conform with the recommendations of the Stoker Manufacturers' Association.

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CONVENIENT GRATES built in four sections—two front and two rear (except in smallest size, one front and one rear). Greater ease in shaking and dumping the fire or removing the rocking-type grate bars. In mild weather, when rear sections can be left covered with ashes, a slow fire on front sections provides just enough heat to remove chill and provide domestic hot water.

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Under Auspices of American Society of Heating & Ventilating Engineers

8th Air Conditioning Exposition

Behind the scenes with FORUM contributors

HENRY HESSELMANN, who makes his FORUM debut with a re- Connecticut farmhouse (p. 93), is one of the crop of architects who have opened their own offices since the professional record reads like a Who's Who of modern architecture, for among his former boss's are Alvar Aalto, Duany, Antonin Raymond, William Lescaze. Graduate Cornell in 1937, Hessembl also studied regional plan Cranbrook Academy of Art, housing in Sweden, Denmark, Finland.

Philadelphia's super-colossal city planning exhibition (p) has involved, during the past two years, the talents of half of Quaker City citizens. Near the head of this multitude OSCAR STONOROV, designer of the project and one of important spark-plugs since he and colleagues Robert and Walter Phillips dreamed up the idea in 1944. S who studied in Florence and Zurich and worked in Paris. Andre Lurçat, has won his American reputation in the problems of public housing and planning.

EDMUND N. BACON, co-designer of the exhibition, has many of his ideas via correspondence with Stonorov more actively engaged in the invasions of Iwe Jima and Okinawa, Senior Land Planner for the Philadelphia City Planning Commission, Bacon started his career with a Cornell study under Eliel Saarinen at Cranbrook Academy. Pre-war jobs include architecture in Shanghai, China; visor of City Planning in Flint, Mich.; Managing Dire- the Philadelphia Housing Association.

ROBERT MITCHELL, Executive Director of Philadelphia Planning Commission, acted as liaison man between the organization and the designers, supplying the vast amounts of information on which the exhibition was based. One of the original men of the exhibit, Mitchell has been an active planner, student days at the University of Illinois, when he went the late Henry Wright's Town Plan for Radburn, N. J. Now he served as chief of the Urban Section, National Re- Planning Board.

WALTER M. PHILLIPS, is Chairman of the Citizens' Group, which, with the Chamber of Commerce, sponsored the exhibition. A graduate of Princeton and the Harvard School, Phillips got his start in 1938 with a Philadelphia charter movement which promptly failed. The group of artists that included young crusaders then turned to city planning, making the hot political issue, emerged in 1943 as the present influential Citizens Council. They are largely responsible for the establishment of a permanent city planning commission.

EDWARD HOPKINSON, JR., honorary Chairman of the Planning Commission who served as coordinator of the exhibition, has been termed the most important man in philadelphia politics. As partner in Drexel & Co., Vice- dent of the Investment Bankers Association of America, member of one of Philadelphia's oldest families and a name friend of every influential business and government in the city, Hopkinson insured both financial and legislative support for the planning project.

ARTHUR C. KAUFMANN, Vice President and Director of G. Kaufmann Brothers Inc. and Executive Head of the Philadelphia donated the 50,000 sq. ft. of space on Gimbel's fifth and floors where the spectacular exhibit was staged. Kaufmann not the first member of his family to take a flyer in mid- architecture. Cousin and fellow-merchandiser Edgar J. Kaufmann, President of Kaufmann's Department Store in Pittsburgh, is the famous owner of Frank Lloyd Wright's famous Fallingwater.
The panels of PC Glass Blocks in this big modern plant admit plenty of clear daylight into extensive shops, workrooms and offices. By directing good working light to remote desks, machines and benches, in all sorts of buildings, PC Glass Blocks prevent waste of valuable floor space and reduce artificial lighting costs—economies your clients will find important.

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Capable of carrying 5000 people an hour, it handles more persons per dollar investment than any other moving stairway. Wide enough to comfortably carry an adult and child on one step, it is the ideal size for most stores, stations, plants, banks and other public buildings. Yet for all its spaciousness, it requires less space and structural work than narrower moving stairways.

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NEW FREE BULLETIN B-700A tells the whole story. Write for your copy to Otis Elevator Company, 260 Eleventh Avenue, New York 1, N. Y.
Construction of this new office building for Certain-Teed Products Corporation at Ardmore, Pa., called for a 3 inch monolithic concrete floor on Steeltex wire lath supported by bar joists.

A WALKER System of Underfloor Duct was specified by the architect because of its ready adaptability to this modern method of construction—and to insure flexibility of the electrical system during the life of the building.

Write to us for our Catalogue No. 146 or consult Sweet's Architectural File for further details.

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- Stanley Hardware
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- Hall Heating
- Inst. Boiler & Radiators

**HEATING & PLUMBING** (Cont'd)
- Meritland Hot Water Heaters
- Petro Heat
- Automatic Air Filters
- Beto-Rooter Sewer Cleaner
- Sherman Bath Fixtures
- Stever Soft Water
- Superior Fireplaces
- Trane Heating
- Williams Oil-O-Matic
- Youngstown Kitchens
- Mullins

**MAJOR APPLIANCES**
- Bendix Washer
- C.P. Gas Range

**MAJOR APPLIANCES** (Cont'd)
- Deepfreeze
- Dexter Washer
- Filter Queen Vacuum
- GE Disposall
- GE Home Freezer
- GE Range
- Household Fixtures
- Horton Ironer
- Hotpoint Refrigerator
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- Home Freezer
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**CIRCULATION OVER 3,000,000**

America's First Service Magazine
PHILADELPHIA'S MAMMOTH EXHIBIT EMPLOYS THE TOUCH, DRAMATIC DISPLAYS

Ezra Stoller, photos
Last September and October, more than 385,000 Philadelphians came to see one of the largest and most spectacular displays ever designed to sell city planning to the citizenry. Costing $340,000 and occupying an advantageous spot on Gimbel's fifth and sixth floors, the exhibition boasted three-dimensional models, a huge aerial photo map, movies, a diorama, murals, wall panels, cartoons, a reproduction of an actual street corner and mechanical gadgets—every device known to the display artist—to sock home what is wrong with Philadelphia and what, specifically, can be done about it. In contrast to the extravagant character of the exhibition, however, the improvements it suggested were realistic ones. The value of dramatic displays was in bringing abstract concepts down to human scale, showing the layman, simply and forcefully, what city planning could mean to him.

The exhibition, designed by architect Oscar Stonorov and planner Edmund Bacon, was the climax of but five years of actual planning work, for unlike most large cities, Philadelphia did not even have a paid plan commission prior to 1942. Famous as one of America's early planned communities laid out by William Penn in 1786, Philadelphia grew haphazardly out of its original small boundaries, pushed by expanding commerce, controlled by machine politics and upheld in righteousness by memories of Benjamin Franklin and the Continental Congress. Not until the past decade, when industry started moving away and the phrase "City of Beautiful Homes" began to ring hollowly in Philadelphia's dingy streets, did a complacent citizenry start to worry. The city's present planning enthusiasm stems from the year 1940 when a few civic-minded young men formed "The City Policy Committee," an organization which has since snowballed into one of the most vigorous planning movements in the country. Keynote of their meetings was the feeling—"since we have to live in the darn place all our lives, we might as well do something about it." Heading this vanguard was a brash bluestocking named Walter M. Phillips, fresh out of Harvard Law School and aching for reform. After the failure of an ill-fated city charter movement, Phillips rounded up the fractured group of young progressives who had backed it and gave it something new to think about: city planning for Philadelphia. First necessity here was an expert grasp of the problems involved in running a big city—thus at the charge of useless muck-raking before it could be sold to the public. Fifty of them—doctors, lawyers, architects, planning experts and social workers—met at luncheon two weeks to talk government structure, sewage disposal, neighborhood planning. A comp-
and the bottom, City Hall crumpled. After two
eeked public hearings, called “stampede” by a hard-
realtor, the ordinance was unanimously approved.
Samuel obediently appointed a first-rate com-
with an initial budget of $40,000 [now $200,000
ly] and a technical staff headed by expert Robert
chell, formerly of the NLRB. Many planners be-
that the commission is the best in the country
ce their victory, the Planning Commission has in-
secutive six year plans which are referred to
ty Council every September and are distinguished
ownly character of their suggestions. They
also worked out a more ambitious long-range pro-
which takes Philadelphia up to 1982.
most important work of the past year and a half has,
urse, been the huge exhibition designed to explain
grams to the great mass of Philadelphia cit-
Jointly sponsored by the Chamber of Commerce
Citizens Council on Planning (latest name for the
Joint Committee” which by now boasts 114 member
ations), the exhibit has been in the idea stage
44. At that time Stonorov, Phillips and Mitchell
ght forth this grandiose scheme for educating the
ic, but not until the end of the war could it get fully
way. In 1945, Hopkinson, who pulled so much
it in establishing the Planning Commission, again
ed to. He extracted contributions of thousands of
ers from Philadelphia businessmen and insured poli-
ancial backing from the city. Publicity, un-
donized in scope and given free, included 2 million
ards, posters, window displays and billboards, over
colums of news stories, 20 full pages of advertis-
65 major radio broadcasts and 228 spot announce-
ps. The public could hardly help itself. It came,
ed and, according to questionnaires collected at the
it, was impressed. Whether or not the impression
be lasting remains to be proven, But at the very
thousands of citizens are no longer in the dark as
hat city planning means and means for them.

RAMPS which lead from the lobby entrance were designed as a bottleneck, regulating traffic
flow into the main exhibition rooms. First display at foot of ramps contrasts projected engrav-
ings of old Philadelphia with a diorama of the future city in 1982—as it will look if the ambi-
tious planning program is put into effect. A recorded commentary used throughout to supple-
ment visual material, begins here with an introduction to the goals of city planning.
Adroit layout and handsome settings employ sound and motion in almost every known display technique.

VOCATIONAL SCHOOL MODEL
ENTRANCE - 8th FL.
OLD PHILA. STREET
RAMP DOWN
TIME & SPACE MACHINE
REGIONAL DIORAMA

SCHOOL PARTICIPATION
BACKYARD
DOWNTOWN MODEL
THE PLAN
PLANNING IS HUMAN

REDEVELOPMENT MODEL
BY YEAR PUBLIC IMPROVEMENT PROGRAM

SECTION THROUGH RAMP
SECTION THROUGH DIORAMA

CONTROL CENTER
OLD WASH STREET
PLAY AREA

SCALE IN FEET

10 20 30 40 50

ALL ROOMS
ALL CEIL
ance to the exhibition, with ramps leading into a densely illuminated area, is strikingly reminiscent of Futurama at the World’s Fair. Visitors are directed by the voice of a narrator which recurs throughout the show to emphasize the message of visual experience.

This entire introductory section, including Florama and the theatrical “Time-Space Machine,” is kept in semi-darkness with individual dramatically lighted from behind. Visitors then move into a large open section with bright, over-all illumination. This alternating play of darkness and light is pursued throughout the exhibit to help separate areas and avoid monotony. Wall surfaces have been varied in a variety of gay colors, another simple technique heightening mood and defining separation. Sounds have been kept simple in order to focus on the graphic material and, on the whole, the atmosphere is stylish and expertly done.

Treatment of light and color of necessity played an important part in the organization of such a complex. Equally important was the changing of floor levels at strategic points. An existing two-story auditorium at the corner of the building was utilized as a viewing platform which allows visitors to look down on Florama below. This raised floor section then feeds into the Time-Space Machine, an exhibit designed as a series of concentric circles to provide easy vision of graphics along the wall. Finally, spectators reach the fifth floor level which extends for the major portion of the exhibit. Ramps are again introduced at the own redevelopment study to allow a birdseye view of the giant scale model. Only other raised area is a row house mock-up.

To compromise between forced and free circulation an endeavor was made to facilitate viewing of different types of displays. Visitors must follow a general route, but within these limits are allowed considerable latitude in viewing. In the Time-Space Machine, however, visitors are admitted in groups of 85 to 100, pausing briefly at four lighted stages for a recorded explanation of the displays. At the downtown model, visitors stand on surrounding ramps until the demonstration is finished.

Because the idea behind the exhibit is to take city planning out of the abstract category, numerous humanistic techniques have been employed. Cartoons by Art Osborne, nationally known artist, remind visitors that city planning is just a large-scale application of an everyday process — like ordering groceries or furnishing. The full-size replica of a typical row house, showing what can be done by private citizens to improve their own backyards, also provided a human interest flavor. Favorite of the entire show, however, was the exhibit, a display of neighborhood replanning by children.

Typical of the lush scale of the undertaking is the television room from which 60 newscasts were directed at Philadelphians during the exhibit’s run. Most thoughtful provision was a room reserved as a supervised play space for children.
SUPERIMPOSED, edge-lighted plexiglas planes, illuminated one after the other, show growth of Philadelphia from 1782 to 1947. Changing methods of transportation which have basically influenced the city's pattern are illustrated together with important buildings of their era. Final map (above) reveals speed-up of decentralization caused by the airplane, plus present congested mid-town skyline with Girard Trust and Philadelphia Savings Bank towering over earlier buildings.

1782 Horse and carriage Philadelphia. Penn planned it, a small, filled area between the Delaware and Christ Church are city landmarks.

Growth and decay

1842 The steam railroad has been invented and its growing network brought Philadelphia new in new communication, new transportation facilities, and a new pattern in the city's buildings on central Market Street.

1877 Horse-drawn trolleys and railroads are spreading residential areas, and the times: Broad Street Station, the "Chinese Wall" (elevated tracks which cut the city in two).

1912 The age of the automobile has begun and the city has spilled boundaries into the country. City Hall and The Bellevue-Stratford Hotel push the skyline higher.

TRICK FADE-OUT SHOWS NEIGHBORHOOD OF 50 YEARS AGO CHANGING INTO PRESENT STATE OF DISREPAIR.
in a series of changing displays dubbed the "Time and Space Machine"

PENDULUM SWINGS. THE SHADOW OF BLIGHT SPREADS GRADUALLY OVER THE HEART OF THE CITY

SLOGANS CALLING FOR CITIZEN SUPPORT LEAD FROM PAST TO HOPED-FOR FUTURE
Giant air view shows how realistic six-year program would change the city's face

This huge photo-mosaic features only projects already approved by the City Council. It is of particular importance in gaining the confidence of a public made cynical by utopian futuramas and the Utopia of local politicians. Every project, down to the last length of pipe, has been accounted for in the current six-year budget and much construction has not been definitely scheduled due to shortages and similar complicating factors. The display also helps to communicate the continuity of the six-year programs. Each September a new list including unfinished projects from the preceding year's recommendation plus one year's new work, is submitted by the Planning Commission to the City Council. Thus at any given time, some Six-Year Plan is in effect. Each succeeding plan is modified to allow for such conditions as available funds, labor market, material shortages, general economic conditions, etc.

The map (see right) is divided into four sections, South Philadelphia, Central Philadelphia, West Philadelphia and Germantown so that spectators can get a close view, locating their neighbors' and their own home. Thus, improvement gains a personal meaning which could not be conveyed by an abstract listing of projects.
Public improvements are spotted on sectional photo-mosaic by means of plastic symbols, lighted from below.

and street signs are placed at close intervals to enable visitors find their way easily in the map. The 1947-52 plan shown here typical of Philadelphia's down-to-earth improvement program. It includes: 1) Abatement of river pollution, extension of sewers and water lines. 2) Full development of Southwest Airport. 3) Replacement of elevated tracks in center of city by a new boulevard.

4) Construction of Penrose Avenue Bridge and approaches. 5) Increased recreation facilities such as parks, playgrounds and swimming pools. 6) Extension of Market Street subway. 7) New health centers, schools, and other much-needed institutional building. 8) Incinerators for improved refuse disposal. 9) Completion of Pier 80, South Wharves. 10) New highways and street paving. 11) New police and fire stations.
VISITORS FIRST SEE PHILADELPHIA AS IS, THEN SECTIONS FLIP OVER TO SHOW PROPOSED NEW PROJECTS

SECTION 7

DOWNTOWN PHILADELPHIA
Scale model of downtown improvements

is a successful tour de force

The most elaborate display in the exhibition is a 30 x 14 ft. scale model of the downtown area of Philadelphia from the Delaware River on one side to the University of Pennsylvania beyond the Schuylkill River on the other. As the visitors approach down a ramp, they first see the city as it now is. Then, synchronized with an explanatory dialogue and section-by-section spot lighting, portions of the model flip over to show the proposed improvements. Eventually the entire model is reversed, showing the center of Philadelphia as it could be in 30 years if all improvements were carried through. This is the long-range program for which the Planning Commission particularly needs informed citizen support and which is therefore the major raison d'être of the exhibition. Improvements include a widened Vine Street (the state has already acquired the necessary land), a large bus terminal, an express highway along the Delaware River, a new merchandising center with underground parking at the foot of Market Street, new bridges and apartment house projects, a stately mall to set off Independence Hall (the state has set aside $4 million toward the purchase of ground and buildings) and the replacement of the “Chinese Wall” with a new midtown boulevard.

The model itself cost $50,000, took nine months to build and contains 45,000 buildings, 25,000 autos and buses and 12,000 individually made trees, fashioned of buckram.
Close-up views of proposed projects for downtown Philadelphia, worked out in detail by various architecture firms.

**REDEVELOPMENT OF DELAWARE RIVER FRONTAGE.** Express highway is flanked by yacht basin and a wholesale center, designed with underground parking. Adjoining the center is a playground.

**NEW PUBLIC BUILDINGS.** Low structures connected by sunken plaza, Museum of Natural History (right) and Academy of Music (left). Skyscrapers on stilts is the new Federal Building which adjoins existing Bell Telephone Building.

**VINE STREET BRIDGE ADJOINS APARTMENT GROUP, IS SURROUNDED BY PARK ON EITHER BANK OF SCHUYLKILL.**
suggest a possible pattern for future building, both public and private

INSYLVANIA BOULEVARD, new approach to the 30th Street on, cuts through the center of town, relieving traffic tangle. Left angle of office and apartment buildings laced with green space.

NEW COMMERCIAL BUILDINGS in heart of business district. Department store (center) connects with office building by means of an overpass. Small park relieves monotony of city concrete near existing City Hall (upper left).

APARTMENT HOUSE DEVELOPMENT near 30th Street Station and Drexel Institute of Technology. Low density and park-like surroundings are characteristic feature of all new residential districts.

MORE TREES, MORE OPEN SPACE. Independence Mall (top right) will be extended by the State, East Mall (center) by the Federal government. Opening up acres of closely-spaced buildings is a prime objective of the long-range program.
Redevelopment study of non-slum neighborhood shows its striking

From the overpowering and rather impersonal display of Philadelphia’s downtown public improvements, the exhibition jumps to the study of an actual community. This district, chosen for overhauling by the city’s Redevelopment Authority, is typical of South Philadelphia’s dingy, overcrowded neighborhoods. Although not a slum, it nevertheless lacks adequate shops, play space and new housing. Visitors are introduced to this community study with a full-size reconstruction of a street corner on one boundary of the district. Complete even to a messy garbage can, it recreates the atmosphere of drabness and monotony which blights many of Philadelphia’s residential areas more than actual disrepair. After this introduction, visitors enter the mock-up of a row house, typical of homes in the same district, but with a revamped backyard. The simple, inexpensive changes show what private families can do to make their own quarters more livable. Last, visitors view a scale model of the entire neighborhood as it would look after the planners had their way. In recommending changes, the Redevelopment Authority has left most of the buildings intact since they were not actually in bad condition. One sector, including an old factory and a few dilapidated houses scheduled for demolition. Key to the improvement of the neighborhood, however, is the removal of 11th Street and its replacement by a playground next to the existing school. Trolley car lines are removed and routed on widened 11th Street. As a result, residents would live on quiet loop streets whose only traffic would be to their own homes. New construction is planned to add convenience and pleasure to the neighborhood. It includes a shopping center, community building, nursery school, playground.
apartment groups, row houses and low rent hous-

Private capital is also expected to find building
fitable when blight is removed from the district and
stability established.

This approach, which foregoes sweeping changes in
or of simple rehabilitation, is likely to gain favor
among real estate interests and a conservative
enery which has little quarrel with the status quo.

The anonymity of huge, one-class housing projects,
ready in disrepute among planners themselves, would
initely not go down with Philadelphians. Therefore,
a wholesale redevelopment of row house neighbor-
would, according to plan, produce a Philadel-
quite recognizable to its present inhabitants. But,
one citizen expressed it: “If some guy wants to fool
and with this place and double the value of my
use, God bless ‘im.”
Replica of typical row house shows homeowners how to refurbish their own backyards.
g the row house mock-up, visitors glimpse from the room window the model of the entire neighborhood which they later examine at close hand. Impeccably recognizable is the elimination of through streets and the opening up of crowded blocks with parks and playgrounds. In some cases the small yards of row houses have been thrown together for a common park and play area. In others (see cut), the street between adjacent blocks of houses has been closed and planted to gardens.

Light of this display, however, is not the distant but a full-size backyard, redesigned to show how to improve their own property. Unfinished materials of wood, wire mesh and inexpensive paving have been employed to produce a handsome new garden in place of the former dismal city yard. Such ideas would cost no more than $75, might be put up by many householders for less. Grass, trees, power boxes while indigenous to most urban scenes, have here been planted with an eye to the full design.
Improvement program retains all sound building, adds facilities for full community life.
1) THREE-STORY APARTMENT BLOCK northwest of the existing high school is an open U-shaped plan surrounding a spacious planted courtyard.

2) NURSERY SCHOOL with specially equipped playground for small children is located near apartments, may be reached without crossing street.

3) SHOPPING CENTER is near apartment group, centering daily activities within easy radius. Parking is for customers beyond walking distance.

4) ROW HOUSES to south of high school are planned as double row with green space between. Balconies and over-all crisp design, relieve monotony.

5) APARTMENT GROUP is also planned to the north of the redevelopment area, near a concentration of new light industry shown in diagram left.

6) PUBLIC LOW RENT HOUSING replaces half of a large city block at northeast corner of district where homes are in particularly bad repair.
School children learn about planning by redesigning their own neighborhoods

Of all displays, the least elaborate was perhaps the most popular with Philadelphians. It was an exhibit of model neighborhoods made by school children, showing what their neighborhoods would be like if they had a hand in planning. The program was introduced last year as an experiment in 15 schools. Its success has made it a regular course of study in every school in the city.

Enthusiasm is equally distributed between planning authorities and the children themselves. The Citizens' Council gloats over the mass base for planning this program should produce in a decade. The Board of Education is delighted with an opportunity to "teach children how to integrate themselves into society." The children, for the first time actively involved in community life, are filled with a new importance. Their surveys of local conditions have taught them more about the neighborhood than their parents know, have helped arouse interest in the adult lea
SECTION 12
CITY PLANNING WORK OF PHILADELPHIA'S SCHOOLS

PLANNING WORK OF PHILADELPHIA'S SCHOOLS

FEMA, LTE

(MLRTT) PLACE

DNC BASKET

ENT MODELS AND SKETCHES, GIVE CHILD'S- EYE VIEW OF COMMUNITY FAILINGS

PLAY SPACE IS PRIMARY CONCERN OF YOUNG PLANNERS
Planned communities for undeveloped outskirts of city are recommended to avoid future sprawl.

In addition to the problem of reclaiming run-down areas, the exhibition also stressed the importance of planning in undeveloped land still in Philadelphia. Photo-murals show an untouched suburban landscape that might be changed by a grid pattern of a typical row house development. Rather than spoil the land's natural assets with an old-fashioned real estate pattern, the planners recommend a modern community (left), laid out in an informal pattern with wide areas of open space.
The lavish exhibition still has a trick to go — "a magic ending" of which the designers are rather proud. As visitors pass the last of the displays, an attendant hands them a "secret message" from Mayor Samuel, apparently no more than a blank sheet of paper. Not until they pass through a dark passage on the way out can they read, by black light, the letter from the Mayor.

It is to be hoped that city government will continue to view planning with the favor bestowed by the Mayor's message. But as the Planning Commission knows, neither official cooperation nor spectacular display can insure the success of any program. One thing the planners hope for is a permanent berth for the dismantled show, so that an increasing number of Philadelphians can see it. Most important, however, is a continuing effort to enlist citizen participation at the neighborhood level. This is being done in Philadelphia with the "Neighborhood Planning Conference," a program which, if successful, should vastly increase mass support.

First introduced in 1945 as an experiment in South Philadelphia's third ward, it may (according to hopeful planners) eventually become a citywide program. Neighborhood committees, mainly housewives, study local transportation, lighting, safety, etc., discuss their findings and suggest improvements to the Planning Commission. As a rule the recommendations are sensible ones and many could have come only through first-hand knowledge of the district. One example is the local rejection of a large central market which the Commission had dreamed up to replace messy pushcarts and stall markets on certain Philadelphia streets. The housewives preferred their familiar and convenient shopping methods, asked only to have the neighborhood stalls put in order. Bowing gracefully to the weight of superior judgment, the Commission was able to cut an expensive item from the budget.

Obviously, the most important aspect of such "grass roots," planning, is its educational value. A pre-exhibition survey had shown that only 10 per cent of Philadelphians knew what city planning was and an even smaller number that it had any connection with them. As in every city, getting out an informed vote is therefore the major problem before the planners. Most encouraging note was sounded by questionnaires distributed at the recent exhibition. Sixty per cent of the 365,000 citizens queried answered "yes" to the $64 question: Would you be willing to pay a little more each year in taxes in order to get things done? Whether the same answer will be given at the polls remains to be proved.
The final test of an economic system is not the tons of iron, the tanks of oil, or the miles of textiles it produces; the final test lies in its ultimate products—the sort of men and women it nurtures and the order and beauty and sanity of their communities.

Lewis Mumford

CREDIT
for staging the exhibit goes to behind-scenes experts:

STATEMENT BY LEWIS MUMFORD SUMS UP THE MEANING OF EXHIBIT, IS GIVEN IMPRESSIVE SETTING
Located in Chicago’s Clearing Industrial District, this plant was built by the B. T. Babbitt Co. to manufacture Bab-O drain cleaner and another cleaning caustic for rapid midwest distribution. After an exhaustive study of operations at the main plant in Albany, Architect Blatner finally sold this old (1836) firm on the advantages of a one-story layout, providing for uninterrupted flow of materials and interior loading. And the company seems likely to stay sold. Says president Alton P. Mendelson: “Our ideas on packaging were that gravity must be used to feed production lines. But the result obtained in this one-story layout far exceeds our expectations, and the plan will be used as a model for future branch expansion.”
The architect's desire to plan an efficient, attractive plant that would serve as a model for future branches, and the excellent character of the surrounding industrial community, led to this simple straightforward solution. Walls of brick and concrete block are happily blended with the projected steel sash of the long windows. Entry to the building is through the neat reception room pictured at left, with recessed fluorescent fixtures plus a wide glazed entry, giving spaciousness to a minimum allotment of space. Offices, kept at a minimum since the greater part of clerical procedures will be handled by the main plant, is strategically located to insure smooth operation between manufacturing, production and clerical departments. The plan at the right illustrates the well-knit production process, where chemical materials are mixed next to filters, can bodies made in one process are adjacent to the entry into the production line, stamped tubes with labels and boxes stored next to labeling and packing departments. To insure healthy working conditions a special dust collection system and lighting was installed.
HEATING consists of a split-system of radiant coils in concrete slab for offices, plus unit heaters for the factory section. The revolving head unit heaters used in assembly and production areas are placed in the central portion of the room in such a way as to set up rotational circulation of air towards exposed walls.

LIGHTING was a specific company requirement for better working conditions. Effective placement of continuous fluorescent fixtures over machine shop and production areas assures high-level illumination, while the oddly-spaced distribution of smaller fixtures over the long railroad spurs affords good light distribution for the loading and unloading of cars.

FLOOR LIGHTING was a specific company requirement for better working conditions. Effective placement of continuous fluorescent fixtures over machine shop and production areas assures high-level illumination, while the oddly-spaced distribution of smaller fixtures over the long railroad spurs affords good light distribution for the loading and unloading of cars.

The southwest corner of the model below, and symbolizing the company's product, is a silo and conveying system for bulk ingredients. Servicing both receiving and shipping facilitates the flow of materials from box-cars inside through storage and service areas section lines at the spot where they are used. At the storage and shipping end of the building the-street truck loading dock large enough to accommodate materials left overnight for pickup.

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SAW-TOOTH ROOF monitors and continuous fluorescent tubing light factory area.

The main structure of the plant is built on a 21 ft. steel-framed grid pattern. Over the production area, steel roof framing consists of heavier members to allow for future second story expansion. A continuous monitor, 200 ft. long, lights the loading form, while six saw-tooth roof monitors augment wide expanse of window lighting in the assembly and production areas.

The advantage of a dust-free factory is clearly apparent in the clean and open room pictured to the left.

CONSTRUCTION OUTLINE


CONSTRUCTION DETAILS:

The Architectural FORUM December 1947
HOUSES

Remodeled farm house in Connecticut

HENRY HEBBELN, Architect
Colonial and contemporary elements are handsomely combined in this old farm house, which had already been gutted in preparation for demolition. Fortunately, however, the clapboard exterior had been left on to protect its excellent condition from the weather. Rebuilt a little over a year later when materials were more readily available, the house was restored as a model of efficiency and economy.

AWNING-TYPE WINDOWS, DEFTLY PLACED, MEET VENTILATION NEEDS ON THE SOUTH SIDE

Snapped up in the nick of time, this old farm house had already been gutted in preparation for demolition. Fortunately, however, the clapboard exterior had been left on to protect its excellent condition from the weather. Rebuilt a little over a year later when materials were more readily available, the house was restored as a model of efficiency and economy.

South elevation of original structure shows small windows in best direction.

The house is located a mile from the village, which has an elementary school, library, fire station, community playhouse and general store. Good community facilities are within ten minutes' drive.

Environment is typical of Connecticut—rich, rolling, partially wooded land.

CONSTRUCTION OUTLINE


OFFICE AND LIVING ROOM OPEN WIDE TO ONE ANOTHER. NEW GLAZING PROVIDES ILLUMINATION FOR BOTH, AUGMENTED BY ORIGINAL EAST WINDOWS IN LIVING
STING PAINT COLORS TEND TO DRAMATIZE RECENT ALTERATIONS TO ORIGINAL HOUSE
The only space division remaining within the house was a structural stud wall from the living room to the eaves. This now serves as the partition between the living room and kitchen. In plan, the entry hall, with the exception of the second floor bedroom, is kept as unencumbered as possible. The balcony to the glass end of the house as well as the hall. This, in turn, is open to the third floor, providing a greater sense of spaciousness and ventilation. Everything is planned for the simplicity and ease of a simple country life. The walls are finished in Sheetrock and weathered wool incorporates a few rough wood posts where they were required. Open shelves and sliding cabinet doors of plywood were selected for purposes of economy. Most of the cabinet work incorporates salvaged from an old barn. The main entrance was borrowed from the carriage house with a sliding barn door and the rear which was otherwise left unchanged.
EFFECT OF THE CENTRAL STAIR AND LANDING IS UNIQUELY SPACIOUS. THOUGH PART OF THE SECOND FLOOR IS VISIBLE, BEDROOMS ENJOY COMPLETE PRIVACY.
Winter house tilts shed roof to view

ARTHUR T. BROWN, Architect
JOHN M. HARLOW, Landscape Architect
MEREDITH WOOD, Owner

The requirements of three school-age boys were paramount in shaping the plan of this Arizona house for winter residence. Asking that living space be opened as much as possible to the out-of-doors and view, the owner also emphasized privacy for each member of the family. The architect's elongated plan swings around a generous patio and cuts down cross traffic through the house by providing direct access to the patio from kitchen, living and bedroom areas. The direct connection is particularly important in utilizing the outdoors as part of the boys' sleeping-and-play area in the west wing.

To capture a view of the Catalina mountains, the window wall was placed on the north and the roof tilted in this direction. The unfinished redwood beams of the living room ceiling are carried out in a wide roof overhang above the fieldstone patio.

The storage wall section bordering the dining area is noteworthy as a simple device for space definition. It creates a hallway accessible from both kitchen and living room and also gives a sense of enclosure which helps to make the dining area inviting as an evening study place for the children. The owner's request for materials impervious to growing boys dictated interior finishes of painted brick and natural redwood.

**CONSTRUCTION OUTLINE**

**FOUNDATIONS** — concrete, Portland Cement Co.  
**INSULATION** — Roof—Celotex Corp. FIREPLACE — Damper — H. W. Covert Co.  
**SHEET METAL WORK** — Flashing — aluminum, Aluminum Co. of America.  
**WINDOWS** — Sash—steel casements, Soule Steel Co. Glass—Libbey-Owens-Ford Glass Co.  
**FLOOR COVERINGS** — Main rooms — rugs. Kitchen—asphalt tile, Armstrong Cork Co.  
**PAINTS** — The Sherwin-Williams Co.  
**WOODWORK** — Doors—flush gum, Rezo, Paine Lumber Co., Ltd.  
**HARDWARE** — Schlage Lock Co.  
**ELECTRICAL INSTALLATION** — Switches—Bryant Electric Co. Fixtures—General Electric Co.  
**KITCHEN EQUIPMENT** — Range—Tappan Stove Co. Refrigerator—Westinghouse Electric Corp.  
**LAUNDRY EQUIPMENT** — Washing machine—Easy Washing Machine Corp.  
LIVING AREA IS EMPHASIZED BY UPWARD SLOPE OF ROOF TO WINDOW WALL

STORAGE WALL ISOLATES DINING SPACE, CREATES ENTRANCE WAY

LIZED PLAN TURNS AT BEDROOM WING TO EMBRACE A FLAGSTONE PATIO AND GRASS YARD, ENCLOSED ON WEST BY WALL AND SERVICE YARD LEADING TO GARAGE
Although in some hands a module might prove restrictive, here it appears as a liberating factor, permitting variations in both plan and elevation. The line of the cornice, although rigidly fixed at the window head throughout, thus becomes a lighting cove in the living room; and the living room ceiling, raised one module above the rest of the house, adds space where it is most effective. A similar regularity is found in the color scheme of the house—a scale established by the colors of woven grass carpeting, natural wood and warm coral brick.

CONSTRUCTION OUTLINE

DOORS AT SOUTHERN END OF LIVING AREA OPEN ONTO A SERIES OF SHADED BRICK AND OPEN GRASS TERRACES COMMANDING FINE VIEW OF HILLS.

AND SURFACE TREATMENT OF LIVING ROOM YIELD GOOD ACOUSTICS FOR RADIO, RECORD PLAYER AND LOUD SPEAKER BUILT INTO CABINET AT LEFT.
FROM THE NORTH, THE HOUSE PRESENTS AN APPEARANCE OF UTMOST SIMPLICITY AND REPOSE. SERVICE WING IS AT LEFT, ENTRANCE CENTER, BEDROOM WING AT

WHERE EAVE IS REQUIRED, HORIZONTAL BAND IS PROJECTED ABOVE WINDOWS

SHEATHED SOFFIT OF GARAGE ROOF EXTENDS TO COVER ENTRANCE PA
This house in Los Angeles shows the architect's characteristic­ally competent utilization of a typical piece of Southern Cali­fornia hillside and demonstrates once again his masterful handling of wood. Entered from the motor court at the north­east corner of the plot (top, facing page), the house is organized into an L-shaped plan which places all living areas to the south and west. Here there is a fine view out toward the Pacific and a sufficiently sharp drop to the land to afford complete privacy for the large glass areas. The house is actually not large,* although its 40 ft. living room is so cannily linked with a system of covered and opened terraces as to create the illusion of great spaciousness.

To protect his glass areas from the afternoon sun, Mr. Har­ris has employed wide cantilevered eaves. These are low (6 ft. 10 in.) and quite thick (2 ft. 6 in.); and to prevent them from seeming oppressive, he has perforated the outer edge with a line of open coffers, whose depth is sufficient to exclude all but the noonday sun.

The structural system employed was a controlling factor in the entire design. Built entirely of redwood, the walls are framed to a 3 ft. module, and sheathed inside and out with tongue-and-groove redwood planks, with the joints covered by battens nailed to the studs. This creates a panel effect which carries up to the line of door and window head (6 ft. 8 in.). Above this is a continuous band of lapped boards which, when projected, forms the deep eaves described above.

*Originally built for a childless couple, it was subsequently sold to an­other family—also childless—who find that it suits their needs perfectly.
Small house gives maximum space in minimum area

CARPORT SERVES AS OUTDOOR SITTING AREA, CAN BE ENCLOSED TO PROVIDE FOR FUTURE EXPANSION

With the sleeping and service areas bent in an L into a spacious central living room, architect Dow produced an extremely compact and economical house for the midwest. One of the most important savings realized by this arrangement was the elimination of one wall of the interior corridor. This provided better ventilation yet maintains a clear circulation pattern from the outdoors through either the kitchen or the carport. Oblique supports from the living window sill to the edge of the overhang have decorative than structural value but tend to increase the apparent size of the house from within and without. Exterior walls are of cinder block expose both sides and painted turquoise inside and Woodwork is yellow; sash, magenta. By enclosing the carport, the tool room could be made into an additional bedroom with storage under the eaves.

CONSTRUCTION OUTLINE

BRICK-SHEATHED MARQUEE uses ingenious method for attaching brick to concrete.

The old problem of avoiding plaster or sheet-metal work in exterior soffits has been solved by Van Evera Bailey, Portland (Ore.) in a recently completed commercial building. Inspired by some soffits he had once seen in Europe, Bailey worked out this method for permanently attaching Roman half-brick to the underside of a concrete slab. For all its tour-de-force appearance, the method is actually quite simple. Instead of the standard form, a wooden platform was erected. Over this 1 in. of mason's sand was evenly spread and on top of this the brick were carefully spaced, with about \( \frac{3}{4} \) in. of sand swept into the open joints to keep them in place. Then long, 2 in. wide strips of galvanized metal mesh were stuck in the lateral joints; a thin cement grout was poured into the joints, engaging the mesh which protruded about 1 in. above the surface of the brick. After this grouting had set, the reinforcing steel was placed and the pouring of the slab proceeded in the usual fashion.

Architect and owner are well-satisfied with the result. "Experimentally, we tried to pull out a brick from below," says Bailey. "We had to pulverize the brick to get it out." The facing was also economical: according to Bailey, it cost "less than the $250 labor which the mason contractor had allowed for it."
FLEXIBLE AND LIGHTWEIGHT, Deskey's modular screening system is first step in Boston renovation job.

One of Boston's oldest furniture stores—the John H. Pray & Sons Co.—wanted to add a new line of furniture, wanted to display it appropriately in an old building, and wanted the whole thing done with maximum speed and minimum expense. Donald Deskey Associates, engaged to solve Pray's problem, decided that what was called for was, in effect, a complete new inner shell for the showroom which would mask the window-and-radiator-spotted walls and the uneven, pipe-scarred ceiling. Moreover, the installation would have to be flexible, so that displays could be readily rearranged, and free of the ceiling and outside walls, so that alterations would be held to a minimum.

The system as installed consists of a wooden eggcrate, designed to a 2 ft. module and suspended 6 ft. above the floor, a series of four types of panels, identically sized but offering solid, louvered and trellised effects. These panels have a simple method of attachment to the eggcrate and—because of their threaded pipe legs—may be easily adjusted for small variations in the floor. The entire system is thus both flexible and self-aligning.

Before installing the eggcrate, the old ceiling was painted a dark dull gray. Spotlights, which can be clamped anywhere on top of the eggcrate, can create any effect desired. Louvered and trellised wall panels permit a relatively free movement of light, air and heat from outside walls.
Structural and mechanical alterations were held to a minimum by designing the new screen system to hang free of structural ceiling and outside walls. Designed to a 2 ft. module—which matched the column spacing—the egg-crate ceiling was fabricated in 8 ft. sq. units. These were suspended 8 ft. above finished floor.

Modular ceiling grid permits great flexibility in placement of partitions.

Completely masked by new suspended eggcrate, the old ceiling with its pipes and beams was painted dark gray. Lights may be clipped to new grid anywhere.

Four types of wall panels, of standard size and identical method of support, permit display areas to simulate solid wall (in either natural wood or painted finish), shutters, windows or trellises. Vertical member (left) is designed for open panels, pivots so that louvered screens may be easily inserted.
COLD BENDING of pipe coils for radiant heating installations facilitated by new benders.

AT A COST OF $6, this effective pipe bender was rigged up for on-the-job bending.

20,000 FEET of wrought iron pipe coils were successfully fabricated on factory-built bender. Lever arm at left.

ANOTHER HOME-MADE pipe bender, simple and expensive to assemble, easy to operate. Lever at left.

BASIC RULES FOR COLD BENDING pipe in small, successive bendings, and never use bent portions as a part of the lever arm and is hence subjected to further bending stresses. (Diagram above.)

FOR LARGE JOB-SITE fabrications of many coils of same dimension, a jig may be set up (left). On large diameter pipe one man operates lever arm while another pushes pipe through sheaves in successive steps.

HYDRAULIC BENDERS may be either homemade (left) or commercial (right), manually or mechanically operated. Tal's Prestal Bender Inc., Milwaukee, makes portable model which bends pipe in one operation.

How to bend a piece of pipe without deforming it was, until fairly recently, the least of the headaches facing building men. By the increasing use of panel heating has brought the problem of coil fabrication sharply into focus. One of the trickiest of these has been the problem of cold bending the pipe: and after a number of ingenious mechanisms had appeared, some of which are shown here, the operation has become simple and sure. Some of pipe benders use levers and some are hydraulically-operated; one costs as little as $6 to build, another $1,000. But they all rest upon one principle: when you bend a piece of wrought iron or steel pipe, you stretch the pipe-wall along the outer edge and compress it along the inner one. The pipe wall of the outer curve will be thinned, that along the inner one, thickened. The diameter of the pipe must therefore be held in strict ratio to the diameter of the pipe and thickness of the wall.

To minimize deforming, other factors must be taken into account in cold bending. In the first place, a pipe should never be bent in one continuous operation. Instead it should be made in short, successive stages. In addition, each zone after it is pushed through the machine away from the operator, so that it cease to be a part of the lever arm and is hence subjected to further bending stresses. (Diagram above.)

All photos courtesy A. M. Byers Co.
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**SAYS BING:** "I hate to admit it, folks, but Hope is right. And remember this—you can buy Bonds at any bank or post office in the U. S. A."

**BOB AND BING (together):** "This Christmas, why not give the finest gift of all—U. S. Savings Bonds!"

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**Give the finest gift of all ... U. S. SAVINGS BONDS**

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a World of Material available to you

In the files of The Georgia Marble Company there rests a world of material, accumulated over a period of 62 years, pertaining to the use of Georgia Crystalline Marble. This material consists of photographs and data sheets on exterior and interior applications for theaters, store fronts, courthouses, office buildings, post offices, residences, churches, banks, government buildings, schools, museums, stairs, shower stalls, wainscoting, entrances, mantels, and other uses.

A reference service for you. As a service of The Georgia Marble Company this material is available to you. You need only indicate the type of usage that interests you. Our nearest Sales and Service Office will prepare a packet of pertinent photographs and detail data and either bring it or send it to you, together with samples of Georgia Marble—"the marble with the sparkling crystal." For prompt service, contact the nearest of the offices listed below.

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ANNOUNCEMENTS

A SUBURBAN BRANCH for Bloomingdale Brothers, the large New York department store (sketch below) started this fall in the New York Life Insurance Co. development at Fresh Meadow, Long Island. V. M. Walker, Foley & Smith, architects for New York, work with Bloomingdale's consultant architects Jacobs, and engineer Edward Ashley in developing this store. Fifty departments will be included in the new two-level building which will also provide parking for 1,000 cars and space for baby carriages and bicycle storage. Completion should be in August 1948.

A LONG-RANGE BUILDING PROGRAM for the Buick Div. of General Motors at Flint, Mich., is being undertaken by Knapp Associated Architects and Engineers. An eventual total of 20 new buildings will replace present structures. First unit to get under way in the new assembly building is a three-story building (1,000 by 200 ft.) with a 55 ft. bay at the north end to handle incoming car-frame shipments. Truck receiving-docks are located at the south end. Assembly line starts at the cranebay near the frame space and moves down through multiple sub-assemblies. The whole structure slopes with the grade—1/2 in. to 28 ft. bay. All new units will be of structural steel with sash and brick facing.

AWARDS

The James Lincoln Arc Welding Foundation announced its $200,000 Design-For-Progress Program prizes ranging from $100 to $13,200. Top prize money of $13,200 was awarded to a team of three collaborators in the Aircraft Classification: Paul Hackethal, Clarence Mast and Douglas Carr, all of Koppers Co., Aeronautical Propeller Division. The second main award ($10,700) was won by Dumbaude Design Engineer, for his project in the Strut Building and Bridges division; third ($8,200) was to Storatz, Engineer, in the Industry Machinery Class.

Winners have been announced in the FOURTH ANNUAL NATIONAL TEXTILE EXHIBITION sponsored by the Women's College of the University of North Carolina. Judges were Simonson, Mimi Blaker and Noma Hardin. Among the winners were Roslyn Bileck, New York, printed textiles group, for a tone leaf design; Ed Rossbach, Seattle, Wash., woven Joy Lind, Cranbrook, Mich., woven drapery and upholstery and Tina McMorran, Eugene, Ore., woven synthetics.

EXHIBITS

U. S. TRAINING FOR ARCHITECTS, 1947, the first complete exhibition of work by architectural students, has been bled by the Architectural League of New York for a national-wide tour after its preliminary opening at the Architectural League.
What keeps the walrus feeling swell

can keep your clients happy, too!

The ice-capped Arctic seas appeal to Mr. Walrus—he'd rather be there than anywhere! Because good old Nature has given him a thick, tough hide as protection against the elements.

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showing in New York during November. Planned limitations of a traveling show, the presentation of each of the 35 participating schools is limited to two 4 x 6 ft. panels, whose design expresses its aim in architectural education. William Wurster of Massachusetts Institute of Technology, Serge Chermayeff of the Chicago Institute of Design, Frederick Murphy of the Catholic University, Washington, D. C., presented concepts of professional training needed for the architectural profession in a dinner for university representatives which opened the show. In spite of differences in method and degree, Mr. Chermayeff's dictum "Let us not speak of form—but of purpose and function" summed up the spirit of 1947 educators.

Several colleges worked out models to supplement the exhibit, expressed in their panels. Most effective among these were Cornell's double study of its ideal swimming stadium; the redevelopment suggestion for a section of New York Avenue of the Americas; and (see above) Notre Dame's country house designed for a stream-side slope. More than 50 architectural schools in all parts of the country have already requested showings of the exhibit.

APPOINTMENTS

HAROLD HAUF, professor of architectural engineering at Yale University, is now Chairman of its Department of Architecture. Edward Stone will be associated with the newly organized department as Senior Critic in Architectural Design. To supplement the "visiting critics in residence" each of whom will stay at the University for a period of five weeks to supervise a major problem in Advanced Design, Yale has a number of "visiting critics in residence" each of whom will stay at the University for a period of five weeks to supervise a major problem in Advanced Design. These critics will include: Louis Kahn, Paul Schweikle, Carl Koch and Gardner Dailey.

HENRY DREYFUSS has been elected president of the Society of Industrial Designers for the coming year. Other officers are: Harold Van Doren, vice-president; Egmont Arens, secretary; and Ray Patten, treasurer.

JOSEPH BLUMENKRANZ, New York architect, has been named hospital consultant for the War Department Corps of Engineers in connection with its nation-wide $770,000 construction program for the Veterans Administration.

HUSON JACKSON and ARTHUR MALWIN have been named Design Critics for Pratt Institute, Brooklyn, N. Y. Ron Allwork is now Instructor of Construction at the Institute.

TULANE UNIVERSITY announces the following additions to its teaching staff at the School of Architecture: Dr. Mau Barret—Town Planning;
MR. ARCHITECT

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Charles Colbert—Architectural Design; and James L. (former FORUM cover man)—Advanced Drawing and EUGENE STERNBERG, architect and town planner, has appointed associate professor of architectural design at Denver University School of Architecture.

MORLEY WILLIAMS is now Professor of Landscape Architecture at the College of Agriculture and engineering University of North Carolina.

PICASSO PRINTS

Exhibits of recent Picasso drawings at New York's Museum of Modern Art prove that the artist can still arouse controversy in the medium. A series of reproductions from pen-and-ink drawings in the Mir Golschmann Collection show (1923-1938) examples of his technique. Limited editions of "Tete de F" (see left) and four other prints (4 in. x 20 in.; $5 each) have been brought out by Esther Gentle Studios at 7 Ford St., New York City. Two Matisse drawings, "Femme au Chapeau" and "Head of a Girl" are also available in the series.

PENNSYLVANIA ARCHITECTS MEET

A SERIES OF THREE ALL-DAY SYMPOSIA is being sponsored by the Pennsylvania branch of the AIA. Each session is conducted in Philadelphia, Pittsburgh and Harrisburg on successive Saturdays. The first was held during November second, "Schools," will be in Philadelphia on January second, "Office Practice," March 6th. The University of Pennsylvania, Pennsylvania State College and Carnegie Institute of Technology will collaborate. Speakers are Lessing Williams, Fred Severud, Judson Vogdes, Jr., and Castro Bullock.

CREDITS

HERMANCE-BLESSING STUDIO photographed the Babbitt plant seen on pages 89-92 of this issue; photographs of the model are by M. Schwartz.

Our October news-section report on the UN capitol used eight photographs of an impressively life-like model (see right) to illustrate planning and design features of the project. Unfortunately omitted was credit to Raymond Lester Associates, Mt. Vernon, N. Y., for constructing the model.

“RADIANTILE,” a cellular tile product used for flooring in radiant-heated Keck house (September FORUM, pp. 108-109) manufactured by the Cannelton Sewer Pipe Co.—not Canning as misspelled in the text.

NEW OFFICES

ELIEL SAARINEN, RAIA, and EERO SAARINEN, AIA, announce the formation of a new partnership under the name Saari Saarinen & Associates with offices at West Long Lake Rd., Bloomfield Hills, Mich.

EDWARD DULNAP, AIA, has opened an office for general practice at Edlee, Bethesda, Md.

(Continued on page 117)
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113 The Architectural FORUM December 1947

ANNOUNCEMENTS

John Carroll Dunn, AIA, announces the opening of his office at 717 Washington Place, Baltimore, Md.

Arthur Kelsey has opened an architectural office at 3830 Jefferson Place, NW, Washington, D. C.

William Freed and Miles Gordon have formed an association for the practice of architecture at 624 Madison Ave., New York, N. Y.

Robert Little, architect, is now practicing at 1303 Prospect Ave., Cleveland, Ohio.

Donald Miller, AIA and NSPE, announces that he is in private practice at Hametow-Richfield Road, Barberton, O.

Harold Wright, RE, announces the opening of an office at 20233 Mack Ave., Grosse Pointe Woods 30, Mich.

Donald Fudge, RA, and Alpheus Underhill, engineer, are associated as Fudge & Underhill, architects and engineers, at 103 E. Woodlawn Ave., Elmhira, N. Y.

S. Y. Saito, architect, and Thomas Flinn have opened an office at 513 Lafayette Blvd., Waterloo, Iowa.

Penn-Hubb housing Corp., with offices at 125 E. 23d St., New York, N. Y. is a new firm for the planning, construction and management of investment housing, with emphasis on prefabricated houses.

Frederick Perl, architect, has opened an office of interior design at 12 E. 46th Street, New York, N. Y.

Finsen, Inc. at 925 Madison Ave., N. Y. C. is the new distributor for furniture by Alvar Aalto, Finnish designer.

New Design, Inc., a center for the display and sale of outstanding contemporary (Continued on page 120)


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2. That the owner is: Time Incorporated, Time Life Building, Rockefeller Center, New York 20, N. Y., which is a corporation for the benefit of Elizabeth Busch Pool, c/o Irving Trust Co., Custodians Dept., 1 Wall Street, New York 5, N. Y.; Irving Trust Company, N. Y. C., Successor Trustee U-W of Briton Hadden for the Benefit of Elizabeth Busch Pool, c/o Irving Trust Co., Custodians Dept., 1 Wall Street, New York 5, N. Y.; Business Manager, Vernon H. Thomas, 350 Fifth Avenue, New York 1, N. Y.

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ANNOUNCEMENTS

furniture and home accessories, also offers architectural planning for interiors. Director of the new firm at 33 E, 75th St., New York City, is Dorothy Q. Noyes; assistants are Harriet Rosenberg and Edith Perlman.

CHANGES OF ADDRESS

C. HARDY OLIVER, AIA, and ALEX DICKSON, AIA, announce the removal of their offices to 2065 Blossom St., Five Points, Columbia, S. C.

FAULKNER, KINGSBURY & STENHOUSE, architects, with BEN DYER associate have moved to new offices at 1200 18th St., W, Washington 6, D. C.

ALVIN LEVITIC and SAM REINBROD are now at 9126 Sunset Blvd., Beverly Hills, Calif.

RALPH CROOK, RA, announces that he has moved to Lancaster National Bank Bldg., 126 W. Main St., Lancaster, Ohio.

EUGENE BACK, architect, is now located at 677 Fifth Ave., New York 22, N. Y.

JAMES ROSE, landscape architect, announces that his new address is 439 W, 21st St., New York, N. Y.

WHITE & GRIFFIN, architect-engineer associates, have moved their office to 126 John R., Detroit, Mich.

EDWARD MILLS, FRIBA, has moved to 38A Soho Square, London, W, 1, England.

MATTHEW EHRLICH, architect, is located in offices at 908 Chestnut St., Philadelphia 6, Pa.

MILTON PRASSAS announces the removal of his architectural and engineering practice to 1737 Harvard St., NW, Washington 9, D. C.

RILEY CONSTRUCTIONAL SYSTEMS, prefabricated house specialists, are now at 1A Cavendish Road, Leed's 1, England.

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122 The Architectural FORUM December 1947
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Second only to the fabled mislaying of the Statue of was the incongruous loss and recent rediscovery famous "Doré Collection" in the recesses of the Ma Storage & Warehouse Co. Exhumed with the canvas a tale worthy of Dumas. The financial and artistic fia ensued reduced contemporary art circles to pulp story. The collection, comprised of some 85 drawings, engraving, watercolors and oils, was mourned as the genius at the time of its disappearance. Reappearing century later it had, aside from the accompanying little to offer but garish curiosity value.

During the Victorian era, Alsatian-born Gustav Doré, probably the world's most prolific and widely known illustrator. At the time of his death he was credited with 75,000 items. Most dusty, inaccessible bookshelves of American homes boast familiar classics illustrated by Among them are Tennyson's Idylls of the King, Inferno, Milton's Paradise Lost, Rabelais' Gargantua and Pantagruel, Droll Stories, La Fontain's Fables, Perrault's Fairy not to mention the Bible. The last 15 years of Doré's life devoted to religious painting and a smattering of scu It was during this time, his "massive period," that he trated the outsize canvases unearthed last spring. The Christ's Entry into Jerusalem, measures 20 x 30 ft.

In present day estimation Doré, as a painter, is cons regrettably, if at all. His color is bad, his taste wcomplicated composition painfully academic. But as a straight del he still holds his own. He was endowed with an inf photographic eye. Nor is it difficult to perceive how an his peculiar brand of majesty and crawling reality inflamed the repressed Victorian consciousness. This realism was used to advantage in some of Doré's more nant and less ostentatious sketches of the sordid slum tions of his time.

Aside from the volume of his work, Doré, who died age of 51, was distinguished among painters for having e during his lifetime over a million and a half dollars—the acclaim of most literate people. Victim of an Os complex, he never married. He devoted his life to the of his mother, survived her by only two years and died be he had never been recognized as a great maste 1868, two years before his death, Doré sold the "lost" e
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Reviews

Almost within that hour philanthropist Holzworth found himself being questioned by a New York magistrate on—among other things—what he intended to do with the Do

(Continued on page 126)
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It can be done. Where do the savings come from? From the use of steel panels that are fabricated and insulation-filled at the factory . . . from the speed and ease with which men, without special skill or special tools, build up the wall with large-area sections. Less handling. No waiting for drying. Naturally, numerous openings require additional framing and fitting costs.

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REVIEW

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October 28th saw a more pensive but still genial Kaliski again presiding as auctioneer. This time, however, he permitted himself no personal speculation on the character of the bidders. Matters proceeded in a somewhat more orthodox manner. Seven of the most important canvasses went to San Francisco architect Albert F. Roller, designer of the new Angeles headquarters for the Rexall Drug Co. (FORUM, Oct., '47) who had bid against agents representing Cecil B. DeMille and Charles Boyer. An increase of nearly $500 over Holzworth's bid for the whole collection indicates that events established pretty clearly the market value of Dore's work.

As a patron of the arts, Holzworth is a newcomer, and one to be watched. He is, however, President of the National Association of Wild Life Conservationists. At one time he served as Assistant District Attorney of Westchester County and ran in the Congressional primaries on the Republican ticket. Aside from being a recognized authority on grizzly bears, Holzworth also claims to be an ex-heavyweight wrestling champion, author, explorer, big game hunter and motion picture pioneer. Considerable personal publicity has come his way through several previous brushes with the law in which he was acquitted on other bad check charges, fraud and disorderly conduct in picketing the Capitol. At one time he imported German jackrabbits on a large scale, claiming the American breed too sly for the average hunter. In 1933 he had the distinction of turning the Young Democratic Convention in Kansas city upside down by masquerading as the "lone delegate from Alaska" with forged credentials from the Governor. How he retained his listing in Who's Who until this issue is best explained by the editors of that eminent publication.

As we go to press, Holzworth, from a Washington jail, has petitioned the judge repeatedly reminded him that it was only a hearing, finally produced the $100 required bail and extricated himself from his surroundings, telling the magistrate that he had to be in Washington the next day to appear as counsel in a murder case dating back 16 years. Remarkably, this turned out to be so. However, as Holzworth was leaving the district court in Washington the following day, U. S. deputy marshals nabbed him on another charge involving a $25 bad check. Wired Holzworth to the New York court: "ARRESTED FBI ANOTHER 25 PHONY CHARGE, GETTING RAIL. TAKING FIRST-PLANE. REGRETS. THANKS COURTESY." Characteristically, he saw to it that the press was promptly informed of his latest status, also that he had failed to obtain the writ of habeus corpus which he had come to Washington to seek for his client.

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\textbf{Exhibition}

\textit{The Arts Work Together}, an exhibition on view at the Mortimer Levitt Gallery, New York, through December 6th is an offering of which Director Verna Wear can be proud. Following, as it does, on the heels of the Bertha Schaeffer exhibit (\textit{Forum}, Oct., '47), New Yorkers hopefully predict that more and more people will take seriously this business of closer collaboration between the arts. The Levitt show is the more ambitious and is not limited to houses alone. It is comprised of ten entries, some presented in sketch form, others as scale models, treating residential, commercial and industrial projects. The exhibit, which is the first of a series planned to stimulate the integration of the arts in building, features the work of top flight artists in their respective fields.

Shown here is the model of a restaurant facade designed by architects George Nemeny and A. W. Geller, sculptor Jose de Rivera and mosaicist Max Spivak. Though mosaic is constantly gaining in popularity as a durable and easily maintained exterior building finish, in this instance the artist elected to use it inside the glazed entry. The striking sculptural abstraction above is finished in chromium. Typical of Devon Dennett's admirable craftsmanship, this particular model is outstanding. However, that of the El Panama Hotel courtyard runs a close second. Landscaped by Thomas D. Church to compliment and develop Ed Stone's handsome building, it features a

\textit{(Continued on page 132)}
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Prepared with the cooperation and technical assistance of the Libbey-Owens-Ford Glass Co., this book presents perspectives and plans of one solar house for each state of the Union. Accompanying text was written by the architects. It is stated in the introductory chapter that "the only limits placed on the designs were that they should be within the medium priced brackets . . . and that the houses should lift their faces to the sun through extensive windows, or even walls of glass, not only to enlist solar energy as an auxiliary heating plant but chiefly to unite the interiors with the out-of-doors in a spacious cheer-filled atmosphere." The result is a wide interpretation of the solar house ranging in quality from medium to good. For the sake of presentation all are shown in sketch form. While the book presents an adequate and simplified outline to the theory underlying solar design, it is badly written and would be practically useless to an architect from a technical standpoint. (Continued on page 134)

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Moleta ARCHITECTURAL


Though new and remodelled apartment buildings pepper our cities in greater concentration every day, until the appearance of Mr. Kamenka's book, this field has been sadly neglected by architectural writers for some time. In it the author, a specialist experienced in multiple dwelling design in Europe and America, analyzes apartment house development of the last 20 years in principal capitals of the western world. Though in American planning he does not cover the most recent and progressive ideas, his grasp of the situation until the outbreak of the war is entirely sound; likewise, his views on community planning, block design, etc. Photographs are excellent and the text neither too brief nor too padded to be a useful architectural reference work. The author, who has established his practice in New York, has arranged to have his book distributed through Brentano's and Barnes & Noble in that city.—M.S.

FOREIGN PERIODICALS

WERK. Technikumstrasse 81, Winterthur, Switzerland. One of the outstanding international monthlies printed in German with French and English translations. Was available throughout the war. Contains much significant architectural and artistic documentation. Annual rate: 40 (Swiss) fr.

ARCHITEKTURA CSR. Prague, Czechoslovakia. One of several Czech professional journals understandably preoccupied with national reconstruction problems. Most articles are borrowed from foreign periodicals. No English translations.

FLAT OIL PAINT

COSTS LESS Latest electronic manufacturing methods plus high volume production put Olsonite ahead of the field both in low unit cost and in speed of delivery.

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134 The Architectural FORUM December 1947
Weigh all the advantages

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Adds long life and perfect balance to the York Allis-Chalmers Turbo Compressor

Impeller wheels for the Turbo Compressor are built with the same care as the balance wheel of your watch.

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York blades are forged and milled with the rivets integral, and which are flush-headed into counter-sunk holes in hub disc and cover disc, thus providing passages free of rivet heads that would impede gas flow, use up non-productive horsepower.

Finished blades are checked for balance by Troy weight, as used by jewelers, and after assembly, impellers are tested at 30 percent above top operating speed.

The care exercised in the production of this one part, however, is typical not only of the complete turbo-compressor assembly, but of the whole York line of refrigeration and air conditioning products. York Corporation, York, Penna.

York’s Engineering Assistance backs up York’s Outstanding Equipment

Experience and practical technical assistance unequalled elsewhere are available to you as a York customer . . . wherever you may be.

In the Middle Atlantic District, for example, Manager Lebair located in Philadelphia, assisted by sixteen York-trained sales engineers, are at the service of York customers in this district. The highly practical, up-to-the-minute assistance and advice of these gentlemen are available to you at all times, whether you are planning, purchasing, installing or operating refrigeration or air conditioning systems or equipment.

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You'll know that J & C equipment has made others as comfortable as you . . . that you have furnished superior installations and contributed your best to a warm and pleasant Christmas for others.

Best Wishes for a Prosperous New Year.
You can take your choice at the "BIG STORE" . . .

The "Big Store" is an American institution, where a man can get a better buy from a broader choice. That's why most buyers go to a Fairbanks-Morse-Pomona dealer for their vertical turbine pumps. They know that these dealers are not restricted in their recommendations. They know that they'll get impartial help in buying the right pump.

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A name worth remembering
HOME HEATING UNITS incorporate Anthratube coal-burning principle to effect coal savings and convenience.

These two automatic, coal-fired boiler-burner units, a bin feed model manufactured by Axeman-Anderson and a hopper model by D.L.&W. Coal Co., utilize the Anthracite Institute's newly developed Anthratube coal-burning principle (BR 10/44) to achieve greater efficiency, economy and cleanliness. This Anthratube principle completely burns the coal in an exceptionally small combustion chamber by an induced draft. Tests in home installations have shown it to operate at 80 per cent efficiency (as compared with 50-65 per cent in standard equipment) with a result in coal savings of from 15 to 38 per cent. A fan or heat slinger swirls the hot flue gases against the heat transmitting inner surfaces of the boiler to extract and utilize all available heat. Ashes are automatically discharged into a container and dust is prevented from seeping into the basement by the induced draft.

Axeman-Anderson's adaptation of the principle, designated as AA Anthratube, is a fully automatic boiler-burner which, in addition to heating a six to eight room house supplies year around domestic hot water. It utilizes an Archimedes screw to feed the pea-size hard coal directly from the bin into the unit. Thermostatic control automatically regulates temperatures as well as activating the fuel supply and ash removal. This new boiler-burner measures 24 in. wide, 31 in. deep by 42 in. high, has a capacity of 400 ft. of steam or 600 ft. of hot water and is easily installed. Rated output is 130,000 BTU's.

D.L.&W. Coal Co.'s adaptation of the principle is an automatic hopper model which burns chestnut size coal. Only 27 in. wide and 47 in. high, the hopper has a storage capacity of 250 lbs. of coal, or sufficient capacity to heat a five to eight room house for three days during severe winter weather. In this unit, the fuel supply flows by gravity into the compact combustion chamber. The ash ejector automatically removes the ashes into a container large enough to handle the residue from one hopper filling. There are no grates to shake or burn out. Automatic electric controls do everything from feeding the fuel to removing the ashes. When there is no call for heat the unit automatically banks itself for as long as 15 days without attention. This automatic "blue coal" burner can be easily installed and furnishes an abundant supply of domestic hot water all year round.

D.L.&W. Coal Co., 120 Broadway, New York, N. Y.

GAS FIRED WARM AIR FURNACE for low cost homes and apartments provides uniform heat distribution.

Fitting into partition walls or closets of homes or apartments, the Royal Jet Flow is an efficient, low cost, closet type warm air furnace designed to maintain minimum temperature differentials from room-to-room and ceiling-to-floor. According to the manufacturer, the unit provides two-way heating: velocity circulation plus ceiling radiation. Through the use of a venturi principle, heat is delivered from registers placed just below the ceiling at a velocity of approximately 250 c.f.m. As adjustable baffle allows this warm air to be distributed simultaneously in any two or three directions and in any desired volume. Cold air is returned through a grille at the floor level creating a forced air action. The high hot air delivery also converts the ceilings into radiant panels which supplement the convected heat. Quietness of operation is assured by the elimination of mechanical parts plus the use of a Bunsen-type burner and a corrugated fire-box which is designed to avoid annoying contraction and expansion noises. Both burner and pilot valve are equipped with safety-loc new A.G.A.-approved Jet Flow gas furnace comes in sizes with ratings of 25,000, 35,000 and 55,000 BTU's, be equipped with thermostatic controls for automatic temperature regulation. Jet Flow can be inexpensively installed the floor and is concealed with a pre-cut covering for intake and outlet registers.

Manufacturer: Royal Heaters Inc., 1024 Westminst Alhambra, Calif.

STEAM RADIATOR VALVE permits different temperatures to be maintained in different rooms.

Easily adjusted to any temperature setting from 55° to the new Heat Timer Valve automatically controls the temperature of each steam radiator on which it is installed. The manufacturer, the flexibility of the new valve is slightly smaller than the ordinary air vent which replaces it. It has etched on its cylindrical side a scale of temperatures ranging from 55° to 80°, a removable scale rotates around an indicator, can be position any desired temperature reading. In operation the valve automatically discharges air when the temperature within room falls below the indicated setting. This allows steam enter the radiator until room temperature has reached desired degree of heat. At that point the thermostat will close the valve keeps the vent closed. Steam is automatically held until a drop in room temperature again opens the the valve. As no - (Continued on page 140)
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steam feeds into the radiators when heat is not wanted. Consumption is said to be reduced to a minimum. The Timer Valve can be installed on any one-pipe steam system for about $4.95.

Manufacturer: Heat Timer Corp., 160 Fifth Ave., New York, N. Y.

WOOD STRIP FLOORING SQUARE features attractive appearance and easy installation.

An attractive wood flooring square mounted on a heated floor can be easily glued over existing floors, sub-floors or concrete slabs. Each square measure 9 X 9 in., is made up of a number of kiln-dried oak strips, 1 in. wide by 3/4 in. thick, insulated on all four edges with a 1/16 in. latex-impregnated fiber strip and mounted on a backing of the same insulating material. Squares are laid in right angles with mastic glue and the job is finished off with a conventional wooden floor or strips of the new floor. Surface is sanded and finished in the usual manner. According to the manufacturer, the material has several other noteworthy features. The impregnated fiber strips act as expansion joints, and in addition provide a non-skid safety factor. The end-waste fitting and matching of the flooring is exceptionally small, aging only about 4 per cent. Convenient packing in cartons allows easy handling and storage. Castle Square flooring comes in two grades: selected matched and select matched and will be available shortly in 6 in. and 9 in. squares. Cost of the new flooring is said to be approximating the same as oak flooring with appreciable savings in handling and laying.

Manufacturer: Newcastle Industries, Inc., 300 West 56th St., New York, N. Y.

ALUMINUM DOUBLE HUNG WINDOW combines attractive appearance, simple installation and easy cleaning.

Delivered completely assembled, the Nu-Era double window for residential use can be easily installed in three operations. Extremely narrow muntins and beaded polished plate glass provide maximum light and a trim appearance. A retractable jamb member allows easy removal of both sash for cleaning. Gears within the jamb, operated by a handle and push-button type lock, advance or retract this jamb member. The sash are centrally supported by a fine stainless steel cord which passes over a double pulley concealed in the head. Counterbalanced, they operate together. Thus when the jamb member is advanced or locked in place, the sash slide easily up and down. When completely retracted, the cord is completely retracted, they swing entirely free of the frame supported by the cord. Sash can be easily reversed for cleaning from inside the room. According to the manufacturer, the sash are held tightly in place when the jamb section is locked in position. When the window is locked closed there is said to be practically no infiltration of air. Nu-Era window is made in standard sizes, comes equipped with plans and shade brackets, trim. (Continued on page 141)
The advantages of warm-air heating, which have won the preference of many architects and homeowners, are also obtained when modern warm-air systems are installed in commercial buildings. For example, a Jackson & Church "PoweRated" heater provides ample heat at low cost for the Recreation Center at Saginaw, Michigan. The unit, equipped with twenty DUST-STOP Air Filters, handles 11,000 cfm and provides four changes of air per hour.

Today's warm-air heating systems for many sizes and types of residential and commercial structures give this exclusive combination of values:

1. WARM AIR, with room temperatures quickly responding to automatic controls.
2. CLEAN AIR. Filtered at the heating unit, all heat delivered throughout the warm-air duct system is free of nuisance dusts, lint and most air-borne bacteria. Maintenance burdens are lighter because walls and furnishings stay clean longer.
3. MECHANICALLY-CIRCULATED AIR keeps warm air fresh and clean while providing the proper number of air changes per hour.
4. HUMIDIFIED AIR affords greater physical comfort at lower room temperatures.

Architects, builders and contractors who specify and install modern warm-air systems, know that circulating air will be cleaned efficiently. For DUST-STOP Filters, a Fiberglas product, are the choice of most manufacturers as original equipment. They're easy and economical to maintain, too, for replacement DUST-Stops are readily available at low cost through suppliers in every community.

For complete information, see Sweet's Files or write: Owens-Corning Fiberglas Corporation, Dept. 830, Toledo 1, Ohio. Branches in principal cities.

In Canada: Fiberglas Canada Ltd., Toronto 1, Ontario.

*FIBERGLAS is the trade mark (Reg. U. S. Pat. Off.) for a variety of products made of or with glass fibers by Owens-Corning Fiberglas Corporation.
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5300 TCHOUPI TOULAS STREET NEW ORLEANS 16, LA.

The Architectural FORUM December 1947

BUILDING REPORTER

soffit and hardware. An integral lintel eliminates the separate support and no flashing is required over
under sill. The three installation steps include: plat
window in opening, bricking to frame and plastering.
Manufacturer: NuEra Window Co., 23001 Aurora
Bedford, Ohio.

AWNING TYPE WINDOW provides no draft ventila
Super-Vent Windows are easy-to-clean, awning type use in homes, apartments, commercial and institutional
ings. Composed of from one to five vents, depending on window height, vents open outward simultaneously, lock securely in any desired position. When raised vents deflect rain and heavy wind. Vents are operated by a handle at the window base, open to approximately 80° horizontally. Accord
friom inside the building. This allows the upper vent to be lowered when open, permitting access to its e
The newly-designed Super-Vent mechanism is simple and sturdy and to require little or no mainte
Screens and storm sash install inside the windows.
Manufacturer: Super-Vent Co., 303 W. Monroe St., Ch

PLASTIC WALL TILE is self-aligning.
This new plastic wall tile, 4¼ x 4½ in., incorporates a tongue and groove type lap joint with a center notch that fits a dot lock in the adjacent tile. This dot lock secures each tile as it is set in correct vertical and horizontal alignment with surrounding tiles. Another advan
tage of the lap joint design is that it forms a complete wall surface under the joints which stops the mastic
forcing through during installation. It also eliminates the need for grouting joints. Tile comes in a choice of pla
marbelized colors.
Manufacturer: Pittsburgh Tile Co., Terminal Building, Burgh, Pa.

FIRE RETARDANT PAINT for exterior and interior offers appearance, durability and fire protection.
In addition to providing the durability and appearance of first grade paint, Resistall fire retardant paint offers complete fire protection to any combustible surface to which it is applied. It coats the surface with a tough protecting film that is said to resist attacks of fire, weather, moisture, salt air, water. Areas painted with it will not flash, flame or burn, washable and non-yellowing. Resistall comes in both enameled and flat finish. Made with an alkyd synthetic resin base, it can be reduced with any of the common thinners or tinted with regular oil colors without impairing its fire retardant quality. It can be used for both prime or finish coats on wood, plaster, cement, metal, insulation board, etc., and is suitable for both interior or exterior use. Application can be made by brush or spray. Resistall sets up within 2 hrs. and dries in approximately 24 hrs. Coverage is

(Continued on page 143)
Here are your new supply points for Kaiser Aluminum

23 CONVENIENTLY LOCATED DISTRIBUTORS OFFER KAISER ALUMINUM SHEET, PLATE, STRIP, COIL, CIRCLES, ROOFING AND SIDING...IN LESS THAN CARLOAD LOTS

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Permanente Products Company is proud to announce the appointment of 23 of the finest materials supply houses in the country as distributors of Kaiser Aluminum.

Your local distributor offers complete warehouse stocks of Kaiser Aluminum to meet your immediate needs. No longer need you wait for small carry-over stocks...for your local distributor sells in less than carload lots!

This new nationwide network of distributors is in addition, of course, to Permanente Products' 19 sales offices, each ready to help you in solving your engineering problems.

Which means that Permanente Products...in only a little over a year of operation...now completely rounds out its facilities...to bring you more and better aluminum—faster!

Ready to serve you—today...23 conveniently located

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Permanente Products Company, Kaiser Building, Oakland 12, California...with offices in: Boston • Buffalo • New York City • Philadelphia • Washington, D.C.
applied with equally good results to wood, concrete, wallboard, plaster, etc.


CONDUIT CLAMP facilitates installation of ele­
ment conduit.

This new clamp snaps on conduit and remains in placeing both of the workman’s hands free to place and install the conduit. A nail through its tailpiece section securely attaches it to the wall or ceiling. The fixture is reported to be extremely rugged, is cold pressed from .062 in. steel stock with dual reinforcing ribs, and is cadmium plated for appearance.

The clamp fits ½ in. EMT or thin wall pipe conduit, or ⅝ in. standard pipe. Other sizes will follow shortly.

Manufacturer: Industrial Devices Inc., 22 State Road, water, N. J.
"Ten Strike" for recreation

To those who cater to sports-loving America, good lighting has become a "must." They have proved to their own satisfaction that good lighting, fluorescent lighting by Leader, pays big dividends.

For bowling alleys, billiard parlors, or similar businesses that cater to public patronage, fluorescent lighting by Leader can do much to attract customers and to make their activities more enjoyable.

For home installations, too, such as basement or attic rumpus or game rooms, Leader fluorescent fixtures will add much to their charm and utility. For better lighting for better sports... Look to Leader.

Only better electrical wholesalers and contractors distribute and install Leader fixtures.

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WEST COAST FACTORY • 2040 LIVINGSTON ST., OAKLAND 6, CALIF.
Your plans and methods can be quickly adapted to provide your houses with J&L Steel Junior Beam floors. Installation of this rigid, fireproof, vermin and termite proof, shrink-proof floor is simple and fast. It can be accomplished with a minimum of labor. Also you will save money by eliminating return calls by your contractor to repair plaster cracks, sagging doors, stuck windows and creaking floors.

Prospects quickly see the advantages of permanence, safety from fire, cleanliness, low maintenance and resulting economy provided by J&L Steel Junior Beam floors. They make your houses easier to sell and enhance your reputation as a builder.

J&L Junior Beams are immediately available (see below). Write for booklets "J&L Junior Beams for Residences," "Engineering Data" and "Nine Simple Steps" to help you in designing strong, permanent flooring that is easy to install—makes for quick sales.

1. Main wide-flange carrying beam which will support bearing partition also supports Junior Beams on bottom flange. One inch wood spreaders are being placed to space Junior Beams properly.

2. Form boards are being placed on wood spreaders which are cut to length so five form boards may be used without ripping. Duct openings are provided in form work. Depending upon the total live and dead load to be carried, Junior Beams can be spaced to accommodate 4, 5, or 6 form boards.

3. Reinforcing rods have been clipped to top of Junior Beam. Form is complete and sills for carrying studs above first floor placed. Sills are used as screeds to level the concrete slab. Various types of finished floor may be used, such as carpet on pads, wood parquet, linoleum or mastic tile.

4. This "cut away view" shows Junior Beams, reinforcing rods, slab with firestop, studs for non-bearing partition and finished tile and parquet floors.

5. Shows how conventional hardwood flooring can be nailed to strips which were clipped to top of beam before concrete slab was poured.

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The name "AMPRO" on any projector is your assurance of efficient operation ... simplified, convenient controls ... rugged construction ... and long, satisfactory service.

Proof of this is in the remarkable performance record established by Ampro projectors during the past two decades in leading school systems, universities, top industrial concerns, churches, many branches of government service and in private homes all over the world.

The Ampro organization has the production and engineering facilities plus the practical experience to make some of the world's finest precision projectors. Before deciding on any projector—for any purpose—be sure to find out what Ampro has to offer you.

Ampro projectors are distributed through better photographic and department stores. Write for the name of your nearest Ampro dealer—and for full details on the Ampro Projectors in which you are interested.

THE AMPRO CORPORATION
2835 N. Western Ave., Chicago 18, III.
A General Precision Equipment Corporation Subsidiary
at the front. Standard accessories for the line include the
patented banking strips, variable sized wire mesh fry baskets
and cord and plug assemblies. Rated wattages for the fry
kettle, griddle, grill-griddle, waffle baker and hot plate are
4.5 kw, 3 kw, 4.5 kw, 1.65 kw, and 2.5 kw respectively.
Manufacturer: Hotpoint Inc., 5600 W. Taylor St., Chicago, Ill.

WALL-MOUNTED DISPENSERS for hand lotion and pow­
dered soap deliver measured quantity without waste.
These new Bobrick Dispensers, Model No. 85 for hand lotion
and Model No. 50 for powdered soap, are designed to dispense
a measured amount of their respective product quickly,
cleanly and conveniently. Wall-mounted in wash rooms and
powder rooms of hotels, filling stations, shops, factories,
homes, etc., the lotion dispenser delivers a measured quantity
of protective or germicidal lotion without waste or risk
of dispensing any brand of lotion, does not drip, clog or
stain. Model No. 85 is styled with a plastic body and matching
globe, has stainless steel working parts. The Kitchen
Dispenser, Model No. 50, handles any kind of powdered
granulated, bead, pumice or even small flake soap or c
An emasculated steel unit, 8 in. x 4½ in. x 2½ in., it has a
capacity and can be mounted in the kitchen, bath
laundry, etc. A single press of the plunger revolves an imp
paddle which dispenses a measured amount of soap or c
paddle also moves an agitator which prevents the soap
packing. Both dispensers, according to the manuf
2
can be attached to the wall for home use with plastic ad
Manufacturer: Bobrick Manufacturing Corp., 1839
Ave., Los Angeles, Calif.

PLANNING KIT for the prospective home builder.
With the House Planitect the prospective home build
work out his ideas on paper in accurate proportions before en­
gaging an architect. He has only
to cut out a set of rooms from any
of seven cardboard working
Sheets, arrange them to his taste and paste them on a
plotting sheet. Planitect consists of a book of instruc­tion
house plans, four layout sheets and seven working sheets,
latter include scaled plans of many size rooms and other
used in floor planning such as porches, walks, garages, cl
windows, furniture, etc. All drawings are ½ in. scale
automatically make allowance for walls. House Plan
ells for $2.
Manufacturer: Planitect Co., 539 Magazine St., New Orli
La.

LADDER HOIST facilitates handling of building mater
A new piece of equipment for lifting building supplies to
second floor or to any height up to 40 ft., the Lad-E-Vator
hoist is designed for fast, easy, safe handling of loose, flat or
roll materials. It is said to carry loads up to 500 lbs. and
to travel up to 80 ft. per min­
ute. The Lad-E-Vator hoist
consists primarily of a loading
platform mounted on four
wheels, two aluminum ladder­
like tracks and a small gaso­
line or electric motor. Con­
trolled by an operator on the ground, the loading plat­
form travels up the ladder-like tracks to the top where the tran
over the landing to deliver the load inside the work
area. Tracks come in 12 to 25 ft. lengths. Two sections
track can be used to extend the hoist to needed height.
Manufacturer: The Campbell Equipment Co., 6643 Rid
Ave., Chicago, Ill.

STAIR SCALE saves time in stair planning.
This time-saving device combines 10 important scales in
accurately spacing stair risers and treads, rafters, sun
roofs, etc., without lifting or sliding the instrument from
drawing. In addition it provides an accurate architect’s
scale and a quick, precise calculator for computing all fac­t
in stair planning. Scales are calibrated ½ in., ⅛ in., and
in, to the ft. Over-all size of the device is 3½ in. x 10 in.
Manufacturer: Rapidesign. Inc., 111-B South Orange Ave.
Glendale, Calif.

[Technical Literature on page 152]
Architects prefer stainless steel because it is a proven functional material in the modern style. Low coefficient of expansion and contraction eliminates expansion joints . . . permits greater freedom in design. Stainless steel is beautiful . . . everlasting . . . and available right now.

Builders prefer stainless steel because its instant eye appeal and permanent beauty make a better, more salable product. Corrosion-proof stainless steel gutter, downspout, conductor pipe and flashing is light, bright, water-tight . . . never needs replacement . . . can be erected with or without paint. And stainless steel is available right now.

Home Owners prefer stainless steel because it is more attractive . . . permanent . . . reduces upkeep . . . does not stain painted, stucco, masonry or brick walls and surfaces. Building need not be delayed because stainless steel is available right now. Full details upon request. Write

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SHARON STEEL CORPORATION
Sharon, Pennsylvania

PRODUCTS OF SHARON STEEL CORPORATION AND SUBSIDIARIES: THE NILES ROLLING MILL COMPANY, NILES, OHIO; DETROIT TUBE AND STEEL COMPANY, DETROIT, MICHIGAN; BRAINARD STEEL DIVISION, WARREN, OHIO; SHARON STEEL PRODUCTS COMPANY, DETROIT, MICHIGAN, AND FARRELL, PENNSYLVANIA. Hot and Cold Rolled Stainless Strip Steel—Alloy Strip Steel—High Carbon Strip Steel—Galvanite Special Coated Products—Cooperage Hoops—Detroit Seamless Steel Tubing—Seamless Steel Tubing in Alloy and Carbon Grades for Mechanical, Pressure and Aircraft Applications—Electrical Steel Sheets—Hot Rolled Annealed and Decarburized Sheets—Galvanized Sheets—Extruded Grade Steel—Welded Tubing—Galvanized and Fabricated Steel Strip—Steel Strapping, Tools and Accessories.

"Our own experience convinced us ....

**BRUCE FINISHED FLOORS**
rate HIGH in buyer appeal
...LOW in installed cost!"

Reports HARRY J. DURBIN
Well-known Detroit home builder

Mr. Durbin should know. His firm, long-time leader in the Detroit building industry, has used Bruce Finished Floors in more than 1200 units since 1939.

He writes: "Our records, covering eight years' experience with Bruce Finished Floors, show that elimination of the sanding and finishing operations required with old-type strip flooring has saved us an average of $30 to $35 and three working days per unit.

"These savings, combined with the almost unanimous enthusiasm of our buyers and tenants for the exceptional beauty and wearing qualities of the finish, have convinced us that Bruce Finished Flooring is the outstanding flooring in the market today."

All over the country, many leading operative builders like Mr. Durbin are having similar experiences. They're discovering, just as he did, that Bruce Finished Floors are best because they eliminate unnecessary costs and give the buyer a more beautiful floor with a superior, long-lasting finish.

E. L. BRUCE CO.
Memphis, Tennessee
World's Largest Maker of Hardwood Floors

Merle W. Hogan, Architect for Durbin homes, writes:

"Bruce Finished Flooring was first specified by me in 1939 for use in homes built by Harry J. Durbin. Since that time I have specified it for hundreds of clients and observed how it withstood years of use.

"I am sure Bruce Finished Flooring provides a better floor for residential use than ordinary flooring. It provides a pleasing pattern and a fine finish which is easily cleaned and maintained.

"I have also found that Bruce Finished Flooring actually costs less and saves time during construction."

Yours very truly,

MERLE W. HOGAN,
A. I. A.
There's a New
Corner
On the Market

Now you can free your doorways of bulkitis in the "door closer corner!"
New Yale Compact Door Closer has been voted the world's most beautiful closer.

You've always hated the door closer corner — for there has never been an attractive door closer. They've all had bulkitis — which means too big, too bulgy, too clumsy — ugly!

Now comes the Yale Compact Door Closer — the one that architects from coast to coast have voted the world's most beautiful door closer. A new operating structure — rotary piston checking — makes possible an equally powerful, yet 36% smaller door closer — without bulgy "hips". Closing is controlled over the full closing swing, two-speed adjustment at the latch.

It's a door closer to make any door proud. Brackets, too, are handsome. Priced no higher than ordinary closers with bulkitis — it is your answer to the door closer problem.

FREE: Data Sheets and 4-Page Folder illustrating simple operating method, leakproof feature, famous Yale workmanship, "hold-open" device, etc. "Quality Checking Chart" proves Yale Compact Door Closer leads all other makes on 17 quality points. Mail coupon now.

More Beauty . . . Smoother Action . . . Same Price

THE YALE & TOWNE MANUFACTURING COMPANY
Stamford, Connecticut
Please Send Me Free 4-Page Folder and Data Sheets on Yale Compact Door Closer.

Name
Company
Address
This special issue of the Western Electric Oscillator presents a complete treatise on the architectural aspects of broadcast transmitter buildings. Prepared to aid broadcasters construct a transmitter building that will be an efficient part of the technical operation, this guide assembles in compact form a wealth of information on the basic principles that underlie the design of practical, efficient transmitter buildings. Contents are divided into five parts. Section I, "Building the Home for Your Broadcast Transmitter," includes a step-by-step discussion of site selection, layout of the building and construction methods. Section II, "Transmitter Buildings With A Future," features six original designs by architects Deiger and Yerkes. "A Survey Study of 610 Broadcast Transmitter Buildings" gives a detailed picture of the American mitter building, based on replies to a questionnaire distributed to the broadcast industry. "Six Outstanding Buildings Today" presents buildings in use by broadcast stations 250 w. to 50 kw., with floor plans, and interior and exterior photographs. Section V, "The Face of the American Mitter Building," illustrates the exteriors of 24 structures of varied style, location and size.

CONCRETE HOUSES. On-The-Site Monolithic Construction. R. G. LeTourneau, Inc., Longview, Tex. 8 pp. 8 5/8 in. x 11 in.

The main features of Tourmaline-built concrete houses are design possibilities, speed of erection and low cost—ar illustrated in this folder. The basic monolithic units produced by Tourmaline, the modular machine that lays the house frame, various ways these units can be combined to provide homes are illustrated and described. Another section discusses the operation of the Tourmaline, how the house is poured, carried to the site and positioned.

CONCRETE ROOFS. Zonolite Short Span Structural Roof Deck. Universal Zonolite Insulation Co., 135 S. La Salle St., Chicago. 4 pp. 8 5/8 in. x 11 in.

This pamphlet illustrates and describes typical Zonolite short span structural roof deck installations and discusses many advantages. These roof decks are made up of Zonolite Insulating Concrete poured monolithically over paper-bonded wire mesh, ribbed metal lath or other support forms, and properly reinforced to provide a permanent, weight, fireproof roof deck. Specifications for Zonolite Insulating Concrete as used in structural roof decks are included.


Designed to aid maintenance engineers and contractors in selecting the most advantageous product selection for all types of commercial, industrial and residential buildings, this condensed catalog describes Sonneborn "Building Savers" for construction and maintenance. The advantages and recommended uses of various floor treatments, concrete and mortar admixtures, waterproofing and dampproofing products, paints and protective coatings, caulking compounds, roof coatings and waxes are presented along with coverage figures, packaging data and, in several instances, brief application suggestions.


Design and construction features of Lok'd Bar Steel Fact Sash are fully illustrated and explained in this brochure. Dimensions and physical data are shown by full scale diagrams including the sections of frames, muntins and mullions and details of pivoted and projected ventilators. Installation details show application to brick and plaster, concrete and structural steel construction. Size range is shown by diagrams giving width and height of sash, number of lights and ventilators in standard sash. Window opening dimensions are tabulated and hardware details illustrated. Also included is a page of suggested layouts for bays, two pages of Lok'd Bar Steel Sash for interior partitions and a page of suggested window installations in industrial buildings are also featured.
This new book explains fully the principles of kitchen planning. Eliminates hours of detailing by using the 64 standardized layouts that are adaptable to practically any kitchen. Basic kitchen layouts are clearly indexed so that you may quickly find a design to meet specific requirements.

All layouts are detailed to scale, permitting quick tracing. Elevations and a complete list of materials are included for each design. Four pages of details are given, showing location of doors and windows to assure clearance of kitchen equipment, furring above cabinets, etc.

Efficient methods of lighting and ventilating kitchens are also included. Proper circuits and required number of electrical outlets are specified. Detailed product data, is given along with dimensions and brief specifications. The most unique and practical design book ever produced on kitchen planning. Costs $1.00. Other booklets that may help you are "4 Degrees of Electrical Living" (Free), and "Home Wiring Handbook" ($1.00).
Concrete Joist Construction?

Because Today's Costs are NOT Out of Line . . .
Because, strength and durability considered, concrete joist construction is the most economical way to build . . .

In these days of high costs, economy in building is important, provided strength and durability are not sacrificed. Here is where concrete joist construction comes in—since it provides rigid, strong, sound-proof buildings which are fire resistive, yet construction cost is lower. That is because the amount of concrete and, consequently, the dead load, are kept to a minimum for any span or live load. The concrete joist and monolithic top slab are formed with cores of removable Meyer steelforms, supported on skeleton centering. Once the concrete has set, the forms are removed and re-used from floor to floor and from job to job. Therefore, a nominal rental charge can be made for each use. Construction is speeded up.

WHY SPECIFY CECO?

Ceco originated the removable steelform method of concrete joist construction. The company is first in the field—actually providing more services than all competitors combined. So, when concrete joist construction fits your need, call on Ceco, the leader over all. Thirty-five years of experience in the field, on the job, have given Ceco a sure grasp of all concrete joist construction problems. This fund of knowledge is yours to command; in 23 strategically located offices from coast to coast.

CECO STEEL PRODUCTS CORPORATION
General Offices: 5701 W. 26th St., Chicago 50, Illinois
Offices, warehouses and fabricating plants in principal cities
Other Ceco Products Include—Reinforcing Steel, Welded Wire Fabric, Steel Joists and Roof Deck, Metal Windows and Doors, Metal Frame Screens, Aluminum Storm Windows, Metal Lath and Accessories

In construction products CECO ENGINEERING makes the big difference
When your plans include an ORGAN INSTALLATION...

You'll find this Reference Manual most helpful and informative. A copy is yours for the asking!

A 16-page brochure covering features you must look for in any organ you specify: organ nomenclature, American Guild of Organists' playing specifications, relationship of tone, space and cost, acoustics, pipe organ vs. electronic organ; essential and auxiliary equipment; installation requirements and techniques.

Get Rich, Full Tone regardless of type of building, size or shape

consider simplification of ACOUSTICS...then specify the...

WURLITZER ORGAN

Series 20 Two-Manual

There is no more important factor in organ installation than the problem of acoustics. Poor acoustics can impair the beauty of the finest organ music. Proper acoustics can make the message of religious or inspirational music doubly effective.

The Wurlitzer Organ with its amazing flexibility will completely meet each problem and solve it. To assist you in planning for the finest results, the Wurlitzer Organ Service Technician at your nearest Wurlitzer Dealer, in cooperation with a Factory expert, will gladly discuss the installation and recommend the ideal method by which you will achieve the finest results. Organ Division, The Rudolph Wurlitzer Co., North Tonawanda, N. Y.

THE RUDOLPH WURLITZER CO.
N. Tonawanda, N. Y., Dept. FO-12

Gentlemen:

Please send me, without obligation, your 16-page Reference Manual..."Important Facts On Organs And Their Installation."

Name:
Company:
Address:
City...Zon...State...
Design your Interiors

with this

MASTER'S
PALETTE

Originality is at your pencil-point when you work with USP decorative materials.

Whatever the requirements . . . formal or informal, traditional or modern, brilliant or subdued . . . you can create a masterpiece of interior beauty with this figurative palette.

Designer Don Wells offers this suggestion: an arresting Checkwood dado, most of the walls sheer-hung in Rift Oak Flexwood, pillars and occasional wall panels highlighted in "Vintage" Flexglass.

This illustration of the "Vintage Room," Ambassador Hotel, Kansas City, Mo., gives you an idea of the finished result.

"Vintage," "Mimosa" and "Clusters" add new spice to the Flexglass line. Striking designs by Muller-Barringer are fired on the underside of the glass in rich ceramic colors. Three stock patterns available immediately. In addition, you can now order Flexglass in patterns of your own design at slight additional cost.

Don't fail to get complete information.

UNITED STATES PLYWOOD CORPORATION
Dept. F, 55 West 44th Street, New York 18, N. Y. Flexwood and Flexglass are manufactured and marketed jointly by United States Plywood Corporation and The Mengel Company.


A practical guide to the effective design, installation, maintenance and repair of fluorescent lighting systems, this second edition of "Fluorescent Lighting Manual" is a complete reference manual for solving the various problems of modern fluorescent lighting practice. The book emphasizes practical design, installation and servicing procedures, shows methods of calculating illuminating requirements and provides helpful guidance for the correct maintenance and repair of fluorescent lighting equipment. Thoroughly revised in line with the latest advances, it includes information on new types and sizes of fluorescent lamps, auxiliary equipment improvements and recent lighting techniques. Typical of the new material is data on Slimline and Circline lamps, full explanation of glare rating system, discussion of the acceptability of lamp installations, etc. Many tables, charts and photographs amplify the illustrations.


This data manual describing General Electric Q-Floor opens with a general description of Robertson Q-Floor products, the fittings and accessories necessary to utilize the flexibility of the floor as raceways for electrical conductors. Several sections contain detailed descriptions of these fittings and accessories and data pertaining to layout design and installation. The concluding 61 pages are devoted to diagrams, drawings and photographs taken during installing Q-Floors.

RADIANT HEATING. What We Have Learned From Radiant Heating Installations. A. M. Byers Co., Clark Building and Pittsburgh, Pa. 12 pp. 9 3/4 in. x 7 3/4 in.

To give a cross-section view of trends and engineering techniques in methods and materials and the limitless variations in applications for radiant heating, this booklet presents a study of 1,000 radiant heating installations. The findings show that 45 of the 48 states now have radiant heating installations. Ohio leads with 16 per cent of the total of installations. Radiant heating has its biggest market in the residential field. 53 per cent of the installations use floor type radiant heating coils exclusively. In more than 90 per cent of the projects, coils were embedded in concrete floors. Multi-story buildings make up 73 per cent of the installation. Coil types in several hundred installations showed slotted coils in 55 per cent of the structures, and grid coils in 44 per cent . . . Over 90 per cent of the projects used wrought iron pipe.


Prepared especially for engineers and draftsmen as a reference in the design of pipe coils and fin coils, this engineering book provides complete and easily accessible information necessary for laying out pipe and fin coil types for heating and cooling applications. It treats heat transfer "K" factor for all ranges of heating and cooling from minus 60° to 350° F, gives recommended air velocities and fin spacing for direct fin coils and shows in detail how to calculate and design and fin coils for all generally encountered heating and cooling loads. Besides reference and design sections for both direct fin and indirect fin coils, the book covers such subjects as insulating testing and finishing of coils, calculation of heating-cooling coils and methods of computing fin coil surface area. There is also information on the application of coils to particular types of heating and cooling units and the proper saturated steam. The manual is fully illustrated, has many pages of reference and design tables.

HEATING. The Trane Co., Engineering Data Book, La Crosse, Wis. 8 pp. 8 1/2 in. x 11 in.

This pamphlet offers a brief summary of the following Trane heating products: heating coils for steam or hot water jobs; type A convectors; unit heaters; roof ventilators; wall heaters; valves and traps; hot water products such as circulators, flange fittings, etc.; Trane fan line; the new Trane Q-Floor heating and air conditioning products. Representative items are illustrated and their outstanding features and uses are discussed.
There are no cold spots in this attractive living room, despite its big picture window. The inconspicuous new Baseboard Radiant Panels provide sun-like warmth from floor to ceiling throughout the room. Only 8 inches high, they fit snugly against the wall, look exactly like the baseboard, and can be painted any color to match the wood trim. Give full use of wall and floor space.

Every day's a holiday in this cleverly planned kitchen, thanks to the ease with which American-Standard's gleaming Royal Hostess Sink fits into the continuous counter-top arrangement. Designed for maximum cleanliness and convenience, this double-compartment, double-drainboard model is made in one piece of rigid cast iron finished with a heavy coating of acid-resisting enamel. In white and choice of many colors.

In the American-Standard line, you will find heating equipment and plumbing fixtures that are styled, designed and engineered to fit in with, and enhance, any architectural plan or decorative scheme. American-Standard Products are as fine as money can buy, yet they cost no more than others. For modernization, they can be purchased on a convenient Time Payment Plan. Contact your Heating and Plumbing Contractor for details. American Radiator & Standard Sanitary Corporation, P. O. Box 1226, Pittsburgh 30, Pennsylvania.
New Los Angeles Airport now ready for heaviest air and foot traffic . . .

100,000 sq. ft. of tough TILE-TEX* used in buildings of modern air center

Air traffic will be heavy at Los Angeles’ bustling new airport! But patrons of six major airlines are assured of better, faster ticket and baggage service—more comfortable “between flight” facilities await them—in these carefully designed, modern air terminals.

Yes, and even the floors are ready—come what may—as more and more of today’s travelers take to the air! For Architect N. M. Cirino specified tough, versatile, immensely practical Tile-Tex Asphalt Tile for the passenger terminals and the administration building!

That’s easy to understand—because Tile-Tex easily fills the exacting requirements for a “public” floor. It’s so tough it lasts for years under the hardest use imaginable! Is low in first cost—costs less and less as time goes on—doesn’t require elaborate maintenance! Available now in a rich group of colors and design accessories to assure architects of providing the right floor for every installation.

The Tile-Tex field representative and flooring contractor in your area will be glad to give more information about this top quality asphalt tile. Just write The Tile-Tex Company, Inc. (Subsidiary of The Flintkote Company), Chicago Heights, Illinois. Sales Offices located in Chicago, New York, Los Angeles and New Orleans.

One of three new passenger terminals at the Los Angeles Airport. All floor areas are surfaced with foot-easy Tile-Tex Asphalt Tile.

The new Los Angeles Airport was designed by N. M. Cirino, Architect for the Bureau of Engineering, City of Los Angeles. Notice (above) how all the facilities for handling busy air travelers have been compactly arranged for maximum customer convenience. Notice, too, that the brown Tile-Tex floor is marbleized so dust is less noticeable, maintenance is cut to a minimum.

Comfortably resilient Tile-Tex and the acoustical ceiling team up (left) to lessen noise and confusion in this busy terminal.
been waiting to get into the bathroom

...with a quality line of cabinets?

wait no more

MIAMI-CAREY IS BACK!

Available now without allocation... that's the good news about this famous line of bathroom cabinets... the line that has set quality standards in the industry for 25 years!

And now the Miami-Carey policy of not skimping on quality, even when materials were mighty scarce, again pays dividends for you. There's no "jerry" merchandise to clear out, no second-rate reputation to be lived down. When you give homebuilders Miami-Carey cabinets... brother, that's the best!

To refresh your memory, that includes such quality features as Paintgrip, Bonderized steel... one piece construction... 5-year guaranteed copper-backed mirrors... high quality finishes... solid brass hinges and stainless steel mirror frames... as well as such famous "firsts" as concealed lighting, round mirror cabinets, tooth brush racks, and others too numerous to mention here.

So if you've been waiting to get into the bathroom with a quality line of cabinets that does justice to a really well-designed, well-built home... wait no more! Now again Miami-Carey is back with three outstanding lines—The Miami, The Cavalier, The Colonial—to fit family budgets of any size!

don't forget THE FAMOUS MIAMI-CAREY LINE-UP ALSO INCLUDES...

...a modern, fan driven, electric bathroom heater that's just what the owner ordered for frosty mornings! A smart, efficient, comfortable touch for the most modern bathroom, the Miami-Carey Bathroom Heater does away with "ice box" bathrooms.

The Miami-Carey Line-up doesn't stop there! From access doors to soap dishes, from towel bars to door stops... there's a full line of chromium accessories to really set-off any bathroom.

But to get the complete story...

write FOR THIS FREE CATALOG

"Glorifying The American Bathroom" gives you a complete picture of the Miami-Carey line... gives you details and specifications of cabinet units and accessories... spotlights ideas you can use in your business of creating better homes. You'll want a copy handy for reference, for ordering. A postcard request will bring you a free copy by return mail. Address your request to Dept. A-12.

MIAMI-Carey

OTHER CAREY PRODUCTS

Asbestos Shingles and Sidings • Asphalt Shingles and Roofings
Asphalt Roll Brick Siding • Rock Wool Insulation • Waterproofing Materials
Roof Coatings and Cements • Asbestos Coverall Wallboard

THE MIAMI CABINET DIVISION • MIDDLETOWN, OHIO

THE PHILIP CAREY MANUFACTURING CO., CINCINNATI 15, OHIO
CONTROL ELIMINATES PULLEYS PREVENTS BINDING AND STICKING PROVIDES PERFECT WEATHER-STIRRING

Here is the modern, patented and time-tested equipment which provides the most practical and economical protection and operation for double-hung windows. For any window, old or new, Master No-Draft Sash Balance can be installed quickly and easily for lifetime service and satisfaction.

Properly tempered, correctly tensioned springs give upper and lower sash perfect balance. Metal housing, self-adjusting to the shrinking or swelling of the wood, provides metal runways for the sash that never need painting. They will not rust. They eliminate sticking, binding and rattling.

Master No-Draft Sash Balances act as a perfect weatherstrip for both sides of the window. For the top, bottom and meeting rail, Master cross strips are recommended as shown below.

For new, plank-frame windows or old box-frame windows of any size, save money, time and labor... get the facts now about Master No-Draft Sash Balance. Use the coupon below.

COMBINATION SINK. Thor Automatic Sink—Clothes V Dishwasher and Sink in One Unit. Thor Corp., 2119 South Ave., Chicago, Ill. 4 pp. 8½ in. x 11 in.

Detailed dimensions, roughing-in data and general specifications for the Thor Automatic Sink Unit, Model 250 C, contained in this folder. Drawings illustrate the elements which comprise the clothes and dishwashing assemblies which fit into the Thor Automatic Sink. Information on how these assemblies are installed is also included.


Devoted exclusively to the planning and arrangement of bathrooms and powder rooms, this booklet presents 34 of such rooms designed for convenience, safety and comfort. The plans were developed to serve a three-fold purpose for the prospective homeowner or modernizer: suggest plans for family bathrooms; show economical combination of rooms and fixtures and indicate how it is possible to combine efficiency in minimum areas. Plans, scaled ¾ to the ft., are divided into the following categories: family rooms, compact bathrooms, minimum bathrooms, compact arrangements, powder rooms and combinations.

REQUESTS FOR INFORMATION

New Zealand Lightcrete & Concrete Co., Ltd., manufacturers of G.P.O. Box 842, Wellington, New Zealand, desires information on building materials and equipment which could be manufactured under license in New Zealand.

GIANCARLO POLI, Via Porte Di Sopra 24, Lendinara, Rovigo, Italy, desires information on prefabrication and modular design.

PAUL A. WILHELM, architect, 1010 East Washington Lane, Philadelphia, Pa., requests literature and information on materials and equipment related to hospitals and institutions that are readily available in that area.

R. L. ZIEBER, 7234 Woodley Ave., Van Nuys, Calif., seeks information on inexpensive theater construction for neighborhoods the with seating capacity of 600.

REQUESTS FOR LITERATURE

PAUL H. AYER, architect, 327 Monona Building, Bakersfield, Calif.

J. F. BROWN, Associate Architects-Engineers, Los Alamos, N. Mexico.

COLEMAN & COLEMAN, architects, P.O. Box 212, Landisville, Pa.

COLUMBUS TECHNICAL SCHOOL, 106 W. 63rd St., New York, N. Y.

FRANK GRAD & SONS, architects and engineers, 1633 Connecticut Ave., N.W. Washington, D. C.

FRED W. GUINN, draftsman, 900 Branard St., Houston, Tex.

HOWARD H. HALPERIN, architectural student, 3522 W. Ogden Ave., Chicago, III.

DONALD O. LOOMIS, architect, 114 South Los Angeles, Anaheim, Calif.


STANLEY C. POMO, architect, 391 Delaware Ave., Buffalo 2, N. Y.

TECHNICAL LITERATURE

TECHNICAL LITERATURE
General Electric Q-Floor Wiring System Selected
Meet All Present and Future Requirements

Growing from seven stories to 21 stories in a comparatively short time, the National Standard Building in Houston, Texas, will be electrically flexible with G-E Q-Floor Wiring.

General Electric Q-Floor Wiring utilizes the cells in Robertson Q-Floors as electrical raceways. With Q-Floors, construction is speedy and simple, wiring changes economical, quick, and clean.

CONSTRUCTION DATA
Architect: A. C. Finn
Structural Engineer: Robert J. Cummins
Mechanical Engineer: Reg F. Taylor
Building Engineers: W. S. Bellows Construction Company
Electrical Contractors: Fischbach and Moore of Texas

Q-Floor is manufactured only by the H. H. Robertson Company, Pittsburgh, Pa. Samples can be seen at any G-E Construction Materials or Robertson District Office.

For further information on General Electric Q-Floor Wiring, write (on letterhead) for a free copy of the Q-Floor Wiring Data Manual—address C74-124, General Electric Company, Bridgeport 2, Connecticut.

Q-Floors Are Quickly Installed
Because Q-Floors are made in large sections, and can be laid as soon as the framework is completed, they contribute immensely to the speed of erection of any structure. The Q-Floor, once in place, becomes a working form for other trades employed on the same job.

Q-Floor Wiring Keeps Buildings Electrically Young
Buildings equipped with General Electric Q-Floor Wiring never become electrically obsolete. At any time during the life of the structure, new wiring can be added, or circuits removed, without tearing up floors or interrupting tenants' activities. It's easy to tap an outlet into Q-Floors—anywhere on 6-inch centers.

EVEN-STORY BUILDING GROWS 14 FLOORS TALLER

General Electric Q-Floor Wiring System Selected
Meet All Present and Future Requirements

Growing from seven stories to 21 stories in a comparatively short time, the National Standard Building in Houston, Texas, will be electrically flexible with G-E Q-Floor Wiring.

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G-E Q-Floor Wiring utilizes the cells in Robertson Q-Floors as electrical raceways. With Q-Floors, construction is speedy and simple, wiring changes economical, quick, and clean.
STEEL WINDOWS—Available in a wide range of types including Pivoted, Commercial Projected, Fenestra Casement, Projected and Combination, Residence Casements, etc.—providing windows that are right in size, appearance and operation for factories, offices, apartments, homes, hotels ... in fact, buildings of every type.

METAL PANELS—For lightweight, fire-resistant floors, walls, roofs, ceilings and partitions. Variety of types, weights and sizes makes them extremely versatile—suitable for use in many types of buildings. They fit together in jig time, providing a flat surface ready for paint, plaster, linoleum, plywood or other material of your choice. Cellular types provide space for insulation or raceways for wires, pipes or other service facilities.

STEEL DOORS—Standardized to save you time and money. They come complete with hardware, many with frames—reducing fitting time to a minimum. Available in swing and slide types, in single and double widths. Also turnover and vertical lift doors. Rugged construction assures continued easy operation.

Let's take the JIGSAW PUZZLE out of building

Standardization is the key. Not necessarily standard buildings—but standard parts so designed that they fit together quickly with a minimum of trimming and adjusting.

Fenestra Building Products have been standardized in units which co-ordinate with modular dimensions currently used in modern construction. They keep on-the-site work at a minimum—that saves money. And standardization means lower first costs through manufacturing economies.

This has been accomplished without hampering design freedom. There's a wide choice of types and sizes in each kind of Fenestra Building Product. The three illustrated here are merely representative of broad families of products—enabling you to select a product that's right in every respect for your building—and still benefit from standardization. A glance at the Fenestra sections in Sweet's Architectural File (16a-9 and 3c-1) will convince you on this point. Look them over—better yet, write or call us.

Fenestra
BUILDING PRODUCTS

Detroit Steel Products Company, Dept. AF-12
2251 East Grand Blvd., Detroit 11, Michigan
120 MILE PER HOUR HURRICANE...

couldn't budge RUBEROID TITE-ON SHINGLES

"...not in one instance did we have any blown-off Tite-On Shingles or go-backs after the hurricane."

"...my Tite-On roof is intact, while the roof next to us, just completed, suffered considerable damage."

"We received several thousand calls to repair damage done by the hurricane... no complaints on Tite-On Shingle roofs."

There's a Tite-On Shingle for Each Purpose

Dubl-Coverage Tite-Ons for new roofing — they give complete double coverage over the entire roof area.

Standard Tite-Ons for re-roofing — applied right over old roofing, they give the same wind-proof protection at a savings in cost.

RUBEROID

TITE-ON SHINGLES

Made only by The RUBEROID Co.
Executive Offices, 500 Fifth Avenue, New York 18, N.Y.
LOS ANGELES
does everything big

Whether you step out on Wilshire Boulevard or ride through the hills overlooking Los Angeles, you see more building than in any other city in America.

Los Angeles is doubling everything in sight—homes, shops, apartments, factories, hospitals, office buildings, drive-in markets—every kind and size of structure.

But the stutter of the riveting machine and the flare of the welder’s arc are not confined to Los Angeles. All over the country, teams of architects, builders, contractors, bankers, suppliers and investors, filled with the same building excitement, are making over America’s skyline.

The men who dominate this great nationwide program—some 60,000 of them—have precious little time for magazines. But they invariably make time to study one — the FORUM.

Long experience has taught them that the FORUM’s editors pick the best and the newsworthy. And they know that the FORUM will piece together for them—as no other magazine does—the scattered parts of the complex building puzzle.

Naturally, successful manufacturers of building products have discovered the FORUM, too. Year after year, they make their greatest advertising investment in the FORUM — the most powerful editorial and advertising force in Building.
The advertising pages of FOBUM are the recognized market place for those engaged in building. A house or any building could be built, completely of products advertised in THIS 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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