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The Architectural FORUM
MAGAZINE OF BUILDING

OCTOBER 1946

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VOLUME 35, NUMBER 4

Cover by James Lamonita, photo: Ezra Stoller
HARVESTING PLANS for the NEXT 100 YEARS

MT. ST. HELENS TREE FARM Weyerhaeuser Timber Company Longview Branch

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- Sustained output of forest products, at fair prices, depends on careful engineering of plans for economical long range operation plus proper forest management of the supporting timberlands to provide a dependable and perpetual supply of wood.

- Accordingly, the harvesting plans for the Mt. St. Helens Tree Farm are projected for a century in advance. Predicated on years of fact finding and analyses of timber resources, timber growth and timber needs, these plans provide for: (1) an orderly, progressive, co-ordinated harvest of the untamed, virgin, old growth forest; (2) the restocking of harvested lands; (3) the protection of lands from destructive forces, principally fire; (4) a periodic return to harvested lands for successive forest crops.

This animated map illustrates the cyclical progression of the perpetual harvest. Its factual background rests on unembellished work-a-day maps, plans, estimates, analyses and volumes of detailed supporting data.
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PACEMAKER IN CRACKPROOF PANELS

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BUILDING MONTH. Good building weather was fast running out. Nobody hoped any longer that 1946 would cure the U. S. of the housing shortage. But somehow—despite 708,100 houses started, 350,000 completed—the nation felt better. Veterans continued to marry, babies to be produced faster than new places to live. With baffling perversity, the housing shortage continued to outpace efforts of industry and government. Even if the full goal of 1,200,000 homes were achieved this year—even then, mourned Expediter Wyatt, “the nation would be left with a greater shortage of housing compared with demand, than existed at the beginning of the year.” But we were not likely to get that many new homes. Many thought that the score was practically tallied. Present completion plus future finish-up of houses would probably total under 800,000 units at the year’s end. The National Association of Housing Officials looked into a wintry crystal and declared: “Barring strikes this year, the earliest we can expect a break is the middle or late part of 1947.”

Wall Street’s crack-up early in the month sent a premonitory shudder through the ranks of Building. The bull market of 1942-46 was finished. In five hours, more than $4 billion was wiped off the value of stocks listed on the big board, and real estate securities had slid down with the rest. Realty bonds were down 4 per cent after a drop of 1.2 per cent in August. Like other industries, Building mulled over the effect of this paper tumble. The business activity curve has periodically humped and dipped after the sensitive course of the stock market. Had Building reason to fear? Merrill Lynch, Pearce, Fenner & Beane, the country’s busiest brokers, turned an apprehensive eye towards the current building rush in Florida. The Florida land boom of the twenties collapsed in 1926 and 1927, they noted, and “a nationwide depression started less than three years later.”

Federal Reserve Board experts expressed the dour opinion that a “bust” lurked somewhere in the next 12 months. Their evidence: costs have risen so sharply—65 per cent above prewar scales—that many families are being priced out of the housing market. Houses aren’t being snapped up as fast as they were early this year; prices on old homes have stopped rising.

Inflation was the unbidden conference present at every anxious meeting of government, business, labor. While seamen and truckers walked off their jobs for wages to meet rising living costs, building workmen lined up for more pay, grumbled as the Wage Stabilization Board tried to peg wages at old levels. Building men watched sky-high prices flourish in a black market that was probably the housing program’s biggest unofficial problem. In New York, sub rosa sales of oak flooring had reached an incredible $350 for 1,000 feet, nails were up 900%. NHA flatly denied that black market operations had appreciably halted the home-building job, but moved to stiffen policing just the same.

More crucial than control of materials prices, however, was enforcement of materials rationing. CPA field offices had moved, as the month began, to cut non-residential construction to the bone. But in every city a few big jobs had already grabbed a ride that squeezed out many small projects. Veteran protest had stopped the $5 million Marlboro Race Track in Baltimore, but not a $3.5 million track in Atlantic City. Building men argued that the new drive to restrict non-residential building would depress the entire economy, make for fewer jobs and fewer home-buyers, discourage production in many materials lines.

There were hints that Building Money was drawing in its horns—just a little perhaps, but enough to indicate that it had caught the prevailing mood of trepidation mingled so oddly with the give-it-all-you-have mood of a postwar boom. F. W. Dodge surveys showed a downward spiral in residential commitments; Dun and Bradstreet recorded a leveling off of permit values.

House-hunting Americans were people of quiet desperation last month. They read in their newspapers of English families who had simply grabbed quarters in empty London residences and unused barracks buildings. Although no one knew just why, we had not yet come to that. Expediter Wyatt kept plugging, working out the details of his program—premium payments, guaranteed markets to new manufacturers and prefabricators, more inducements for rental investment. If you churned long enough, he seemed to argue, you would get butter. He moved to strengthen curtailment of most non-residential building, announced that for the first time in five years, home construction actually topped other building. He streamlined and reorganized his staff of advisors. But he was also ready to admit that you can’t make butter from buttermilk. Materials were still in thin supply.

HOT TALK

Industry, labor, veterans blame government and each other.

“A serious charge has been made against me, the charge that I am an optimist,” said Expediter Wyatt. But about his cheerful head there raged a storm of acrimony. From labor’s corner came the voice of U.A.W.’s R. J. Thomas, charging that the jinx on housing was the fault of “those phony friends of free enterprise—the organized real estate agents, landlords, mortgage bankers and black market builders.”

Meeting in Milwaukee for its eleventh annual convention, the United Electrical Workers called upon the federal government to start construction of 3 million low
The Architectural FORUM October 1946

RESTRICTION TURSSLE

Newest non-residential building cut in effect.

Wyatt was in New York, trading salutes with sharp-tongued Peter Grimm on ABC's Town Meeting of the Air. Their topic: "Should commercial building be curtailed to provide homes for veterans?" "There are, at very least, two clear reasons why the NHA policy has not produced houses in sufficient quantity," snapped real estate man Grimm. "The first is that prohibitions against any kind of needed construction restrict and restrain all kinds of needed construction. The second is that a considerable part of non-housing is required for new businesses and it's these which veterans depend upon for employment."

The tussle over restriction of non-residential construction reached a crisis last month. CPA regional offices (in 71 cities) moved to enforce the Housing Expediter's most drastic edict to date—25 per cent further limitations on approval of non-housing projects. To the popular eye it seemed a question of racetracks versus residences. In racing-conscious Atlantic County, N. J., there were few cheers for the spanking $3.5 million Atlantic City racetrack. Only a few miles away a temporary homes project for veterans kept a snail-like pace for lack of materials. But elsewhere the choice was not so simple. Wyatt told debate-opponent Grimm: "If we're going to pay off our housing debt to veterans we have to give up not only juke joints—that's easy—but also new stores and factories and even schools and hospitals that can be postponed until veterans are housed."

How helpful was the new slash-order? In the first week of the month, there was a cut of 57 per cent in the dollar volume of Southern California construction. The order postponed the million-dollar expansion of the Miami Orange Bowl and $10 million of Georgia highway projects, it crowded Denver's $1 million Rose Memorial Hospital to the wall and shut out the $7 million office building of the New England Telephone and Telegraph Building in Boston. The list of projects halted was only part of the effect of the cut. No one could measure the number of plans shelved because sponsors were now convinced that in money was pointless to apply for approval. In one week 29 Boston builders decided not to file their $600,000 worth of applications for new jobs.

In most areas it was clear that the quota of approvals could and was being scaled down. The Chicago district office, having okayed $2 million worth of new non-residential work a week before the order went into effect, let only some $700,000 worth of jobs through a week later. In Detroit, however, district CPA manager John McGillis objected that the two previous control orders issued in March and July had done such as could be done. McGillis argued that Detroit certifications were already way below the city's authorized $1.6 million. He announced, therefore: "No drastic measures are contemplated in Detroit at this time."

In Boston, similarly, CPA Regional Director William Homans expected that reduction in authorizations would be slight. In New England, he observed, "has already been operating at 30 per cent below its set quota."

Residential builders and housing experts gave greater importance to Wyatt's reinforcing of materials set-asides than to the cut in commercial and industrial construction. Also expected to have more effect was the crackdown on "hardship" exceptions. Probably of far more importance than any of these was the grim mood in which the federal government moved last month to tackle the black market.

WASHINGTON RESHUFFLE

Wyatt strengthens prefab and technical team.

It was eight months since Wyatt had come to Washington, a solitary St. George with the job of slaying the housing shortage dragon. At his back he now had a small army. Last month, the Expediter reviewed his staff, revamped top echelons, appointed new lieutenants.

To the list of top administrative officers, he added two new departments—an Office of Industrialized Housing and a Technical Office, both formerly subsections of the Office of Production and Supply headed by Deputy Expediter E. A. Verpillet. The Office of Industrial Housing was put in charge of Robert A. Irwin, key advisor in Wyatt's council. Irwin, formerly Special
JVAUy small lenders felt they were spilling Ind OEM. |Board, FCC, Lend-Lease Administration Agencies. Among Rauh's previous jobs: |i'yatt appointed Joseph L. Rauh, adminis- |f
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|weging in England. |As General Deputy, replacing Admiral |223x248$400 million subsidy authority granted by

**ARKET FOR VET LOANS**

RFC will buy from overloaded lenders.

Many small lenders felt they were spilling over with veterans’ home loans. GI mortgages, gilt-edged by government guaran- tees, were unarguably good investments. Even so, the banks complained, they could not afford to tie up a large bulk of their funds in long term investments with a slow turnover. And the in-flow of GI loan applications was reaching staggering propor- tions. No one had any idea when the flood tide would recede.

The Veterans Administration passed the complaint on to the RFC, and the RFC Mortgage Company agreed to offer a back- stop to the loan program by buying mort- gages from the original lenders. RFC would thus provide a secondary mortgage market for the sterling dead-weight of long-term vet loans, enabling lending institu- tions to continue to finance housing.

RFC purchase specifications were 1) the loan must not exceed $10,000, must bear interest at 4 per cent, must be secured by a first mortgage by VA.; 2) the loan must not be delinquent; 3) the seller must con- tinue to service the loan, for which it will be paid a service fee of ½ per cent of the unpaid balance.

At month's end, however, RFC's generous impulse was lost in a thicket of red tape. Agency executives decided that RFC should get up its own approved mortgage forms, refuse to purchase mortgages that use any other forms. Since mortgage laws differ widely, there will have to be a widely differ- ent form for each state. The necessary forms for most of the states would not be available for two months.

**MATERIAL**

**LINE-UP FOR MATERIALS**

Set-asides and premium payments vs. the black market.

If materials could be obtained promptly, builders told the Mayor of Baltimore, 1,922 veterans' houses would be ready to live in on November 1. The Baltimore Veterans Emergency Housing Committee came up with a break-down: 680 need lath and plaster; 571, heating equipment; 474, soil pipe; 363, flooring; 238, electrical materials; 246, plumbing; 218, hardware.

Although this, with variations, was still the story everywhere, there was more cheer in prospect than there had been for months. August materials production, (see chart), bounced further than at any time since the beginning of the year. Stringent set-aside orders, put into effect early in the month were funneling more of the supply into houses. From 75 to 95 per cent of the production of eleven critical materials was being set aside indefinitely for veterans' housing.

Premium payments, on the other hand, were not doing so well. Only seven pay- ment plans have been approved so far this year, making it virtually impossible for NHA to use more than a fraction of the $600 million subsidy authority granted by Congress. Principle cause for laggard de- velopment of this program has been indus- try’s distaste for subsidies and its inclina- tion to hold out for price increases. A well- taken point is that of the producers of gypsum products: While overall gypsum products profits have been good, producers are making money on board, losing it on lath; consequently they have skewed their production in favor of gypsum board. Price increases, applied with judicious selectivity, would enable them to boost scarce lines, gypsum men say.

The price of materials was already going up by way of the black market. Everyone had known that there was a black market—

but how big was it? How realistic was talk of prices and price control if a major pro- portion of materials skirted them entirely? The New York Times made an estimate that rocked the industry on its heels: 75 per cent of supplies in the suburban New York area were going “underground”, Oak flooring and nails, soil pipe and sheet metal were fetching skycraping prices. Members of the Home Builders Council of New York, New Jersey and Connecticut declared that legitimate home-building was becoming impossible. Said chairman Henry J. Shaheen, “with heavy traffic by black marketers, items such as ordinary nails are almost impossible to find... the ceiling- fixed builder is being forced to give up.”

OPA, aided by Treasury and Justice De- partment experts, was quietly piling up indictments. Thirty major lumber cases involving criminal charges were pending. But the mood of the black marketers was best expressed by one illegal dealer: “So they do fine me. I’ll still be making money. And OPA will be done with next year.”

Wyatt’s experts have maintained that premium payments are bound up with price control and cannot be continued if OPA goes out the window. If price controls are wound up by Congress early next year, one of Wyatt’s big guns will have to be scrapped, having fired hardly a round.

**NEW HEAD FOR TURNER**

Admiral Ben Morreele goes back to civi- lian building.

The Turner Construction Co., one of Big Building's biggest, had a new boss—big, efficient Admiral Ben Morreele, the Navy's past-master construction expert. Henry C. Turner, the com- pany’s founder, was retiring after 44 years. Into his seat as Chairman of the Board would move younger brother J. Archer Turner. Into J. Archer's job as president of busy Turner, Morreele.

Admiral Morreele, formerly Chief of
the Bureau of Yards and Docks, was the strategist who planned the Navy's gigantic construction program, instituted the Seabees, and inaugurated such techniques as the sea-going battleship drydock. Navymen granted him a generous slice of credit for victory in the Pacific.

Turner Construction Co. had a war record, too. In four of the war years its total business was some $386 million. Turner also took on such non-building assignments as management of Oak Ridge City, where it organized a 10,000-man payroll, managed all community services.

Big jobs have been Turner's forte ever since its early days, when it pioneered the use of reinforced concrete, and became a leading recipient of large factory construction awards. Turner company business has risen from $40,000, to $117 million (in 1944). To date, 77 Turner contracts have been for projects costing over $2,000,000.

**PREFABRICATION**

**PREFAB CONTRACTS WAIT**

Likely signees include Harman of Philadelphia.

Another month had shuffled by and prefabricators were still waiting for their big news-break. To whom would Expediter Wyatt give the first guaranteed market contract? NHA negotiators and applicants had been fussing for weeks over a score of agreements and word had gone out that at least four were ready to be signed. A Philadelphia newspaper prematurely gave the compliment to the steel-fabricated model of Harman Homes, likeliest among several newcomers. At month's end, Washington dopesters put veteran manufacturer Jacques Wills peak-roofed plywood Home Ola closest to the finish.

Whoever would get there first, nobody was getting there fast. One cause for delay was the caution of banking institutions in granting production loans to new prefabricators. Unlikely as the possibility had seemed earlier in the year, private money was actually tightening against the factory house, despite government's promise to insure sales. Many a conservative banker thought that prefabrication might have missed its big moment—by next year, conventional housing would be fit enough to offer it competition; in two years, it might chase prefabrication out of the picture. As a consequence, RFC was being asked to relieve the banks of as much as 75 per cent of the risk through participation in production loans.

Policy-maker Wyatt was still rooting for the mass-made house, as he had done since his arrival in Washington. His re-shuffling of his advisory council (see page 6) had again brought the prefab card to the top of the deck. But doubt as to prefab's future also assailed the more nervous in NHA. "What happens," they asked, "if the market dips and a prefabricated house selling for $7,000 or $6,300 goes down to $5,000?" In a bust market the government would have to unload its cold hotcakes at a loss.

On its own power, so far prefabrication had furnished the housing program only some 16,000 units. Balked by shortages, like everyone in the building field, prefab manufacturers were tripped up further by their dependence on such shortest short materials as plywood.

Voted most likely to succeed, as a consequence, were up-and-coming systems relying upon major use of metals or other substitutes. Long-habituated users of wood and plywood were taking another look at metal parts—National Homes, for one adopted steel bar joists and aluminum double-hung window frames.

Among producers who would make metal the major ingredient of their design, none seemed more promising last month than William H. Harman of Philadelphia, whose two- and three-bedroom house (see cut below) had the enthusiastic endorsement of government experts. Harman, formerly vice president of the Baldwin Locomotive Works, struck many as the industry's most significant recent newcomer, a man whose entire previous career had been spent in the precision engineering of metal parts.

As a structural system, Harman's product is closer to pre-cut lumber than to prefabrication. Basically a knock-down assembly it employs some eight tons of parts, shipped in cases from the factory. Exterior walls and roof are of steel, bolted to furring strips and insulation. Interior walls and ceiling are plasterboard. Designer of the Harman House is firm-member Max Essel, with architect Oscar Stonoroff sitting in.

While many of the metal components of the house—sheets, frames, rafters, trusses—will be manufactured by subcontractors in the middle west, Harman proposes to do a large part of the production finishing in a former Mack truck plant near Allentown, which RFC will make available. Houses will reach the consumer through dealers contracted to develop and build homes in community properties. Price f.o.b. factory, is expected to be between $3,250 and $4,000, including utilities. Higher-than-average assembly labor costs will bring its final price, with land, to $6,000-$9,000.

At month's end, government contract officials and Harman executives were still at the conference table. Their object: Federal guarantee of a market for 10,000 Harman homes.
ZECKENDORF CITY
Giant riverside project for New York.

An eight-block jungle of slaughter-houses, factories and tenements, just a few blocks from Manhattan's Times Square district, is the site of one of the most ambitious rebuilding projects ever conceived. Last month Webb & Knapp's William Zeckendorf startled New York with the announcement that his firm would plant a $150 million inner city on a tract of industrial wasteland bordering the East River.

The plan, by architects Harrison and Abramowitz, called for a giant cluster of buildings set upon an elevated table linked to highway and air-landing entrances. Under this great platform, scaled to cover two-thirds of the entire site, the planners assigned parking space for 10,000 cars and a two-story section for merchandise showrooms, shops and broadcasting studios. Above, they stacked two 55-story, arc-shaped skyscrapers (a hotel and an office building); three cross-form apartment towers and four office buildings, all 30 stories high. Also included in the plan is an airline terminal to serve as a direct connection by helicopter with nearby airfields, a helicopter landing field, docks and a circular floating restaurant.

Webb & Knapp are specialists in jumbo ventures, but this is their biggest deal to date. It would out-bulk even Radio City, combine more investment than the Grand Central area development forwarded by the Vanderbilts in the twenties. (Other recent projects include purchase of the entire waterfront of the city of Hoboken, investment in a $50 million model retail center in Flushing, L. I.)

Webb & Knapp already own 85 per cent of the area, but need city help for: 1) preempting space intended for a municipal park; 2) prying loose remaining private holdings; 3) constructing a loop subway line to bind the development into the city transportation system. When hurdles are cleared the project will be forwarded by a parent leasing corporation which will build the underlying platform structure, apartment houses and hotel, lease 99-year "air rights" above platform to large corporations.

Seen on the map, the development appears as the latest, most electric of a series of changes transforming New York's East Side from frousiness to beauty. The 25-year-old shift of fashionable wealth is now being joined by the influence of housing projects for low and middle-income families. With vast facilities for parking, work and shopping moving to the river-front, the change-over will be complete.

TRANSFORMATION of the entire East side of Manhattan may result in a proposed redevelopment project comparable in scope to Rockefeller Center, which has had incalculable effect upon the midtown area. Other developments planned by the Metropolitan Life Insurance Company and the New York City Housing Authority will erase ugly river-front slums, while the Webb and Knapp citadel replaces a disorderly industrial 8-block area, (above). Fashion trends among the wealthy have, since the 1920s, established swank colonies on the East River recalling to this side of Manhattan its social brilliance of the last century.

Growth-spots on Manhattan's map, are, reading North to South, Colonial Village, Riverton, Abraham Lincoln, J. W. Johnson housing developments, Gracie Square, Sutton and Beekman Place, proposed Webb and Knapp development, Peter Cooper Village, Stuyvesant Town, Jacob Riis, Lillian Wald, East River and Governor Smith apartments.
When Henry Kaiser went into partnership and Burns announced that 65 pre-cut homes through, Henry! Now (like plane-makers, ship-builders and auto-men before them) they were eating their words. Kaiser and Burns announced that 65 pre-cut homes were chugging off the assemblyline of their Inglewood plant each week; shortly the figure would be 100 a week.

Kaiser Community Homes also disclosed that it had purchased and laid out for development more than 2,000 acres of land, enough for 10,000 building lots, in Southern California and San Jose. By the end of the year Kaiser and Burns expect to put at least 2,000 houses on such sites, by next year, 10,000.

The completed Kaiser Homes house, "unveiled" last month, was tamely styled, if anything. The uninhibited Mr. Kaiser calls his present enterprise "the biggest housing operation in America," and foresees a bigger future still for a chain of team offices from coast to coast. Kaiser affiliates in Willow Run, Mich, and Portland, Ore, have already acquired 3,200 lots. Total value of Kaiser Homes land now stands at over $4 million.

Kaiser homes will range from $6,950 to $8,650, include gas heating and all other utilities. Hardly resembling the fabulous $75,000 Burns "Dream House" (Forum, March, '46), they adopt some of its design niceties—Formica kitchen sink tops and storagewall partitions. Kaiser engineers explain that they have aimed to simplify the shell structure to allow enhancing features.

Perhaps the most spectacular achievement of Kaiser Community Homes is its articulated organization of the entire house-building series—money, land, procurement, design, construction, sales and even maintenance. Kaiser and Burns propose to procure and subdivide whole developments at a time, arrange loans, build houses on every lot and insure all possible economies in planning the subdivision. The organization will also build community shopping centers, to be rented on a "percentage lease" basis, and provide low cost maintenance.

Kaiser Homes' present program in the Los Angeles area is described by slightly-flushed representatives as a 100-mile assembly line, consisting of one mile of feeder lines into the 15-acre plant, one-quarter mile plant assembly line, a 30-mile trucking line to the site, 25 miles of foundations, 10 miles of homes in various stages of construction, and 30 miles of suppliers.

The uninhibited Mr. Kaiser calls his present enterprise "the biggest housing operation in America," and foresees a bigger future still for a chain of team offices from coast to coast. Kaiser affiliates in Willow Run, Mich, and Portland, Ore, have already acquired 3,200 lots. Total value of Kaiser Homes land now stands at over $4 million.

**MARKET**

**RETAIL RUSH**

Department stores expand and build as business booms.

Strolling softly through his Famous-Barr store in St. Louis, Morton May often indulges in a favorite pastime. He jostles toward a counter in a shirt-sale, takes his place in a line-up for pressure-cookers, falls into conversation with a fellow-customer in the shoe department. Famous-Barr clerks, meanwhile suppress their recognition of the Caliph of May Department Stores (branches in St. Louis, Cleveland, Akron, Baltimore, Denver and Los Angeles).

Late last month May stores received stockholder approval of a merger with Pittsburgh's top Kaufmann's Department Store. President Morton May, whose father had started a small drygoods business in Leadville, Colo, just 60 years earlier, was now boss of the country's biggest retail empire. Sales of the new firm could be expected to go up $300 million, probably put May-Kaufmann ahead of longtime leaders Macy's and Gimbel's.

May Co. holdings were already the biggest in the business—$112.6 million last year (Gimbel's, next in size, was worth $97.8 million). With Kaufmann's $21 million in quality investment, the new firm could claim top notch on the retail totem pole. Last year's sales of the two firms had totaled $246,553,826, well ahead of Gimbel's, Macy's and Marshall Field & Co. Nearest rival: Allied Stores, a holding company octopus whose tentacles extend to 69 department stores.

Morton May had already set his provinces humming with an expansion program bigger than any yet announced by his competitors. New May stores were going up in Los Angeles, Hollywood, Phoenix and St. Louis; additions would be built to stores in Wilshire, St. Louis, Akron and Baltimore; branch stores were being acquired in five smaller Ohio cities.

May's construction contracts have already committed the company to $12.5 million-worth of building work. With new funds gained through the merger with Kaufmann's, an estimated larger portion will await lifting of the ban on non-housing jobs. In St. Louis alone, May's will have spent $7.5 million to remodel its present 12-story building, build three new suburban stores, a downtown garage and a seven-story warehouse.

May's hearty program went to swell mounting pressure behind a boom in department store construction—a boom that promised, by some estimates, to double big store fixed assets within three years. Many projects, like the upper Fifth Ave. store of New York's Best & Co., had bouned ahead of housing program restrictions by seizing an early start. Most big department stores expand and build as business booms.
store plans, however, will have to wait out the housing emergency—or the government's control program.

Meanwhile, store designs accumulate on architects' drawing boards. Every major retail firm is readying one or more of three programs: extensive alteration, establishment of suburban branch stores, new downtown building. R. H. Macy, with king-size (but still largely secret) expansion ideas, will pursue a program of "peripheral expansion" through suburban building. Construction has begun on new suburban New York stores in Jamaica, White Plains and Brooklyn, and Macy affiliates Davison-Paxon and Lasalle and Koch have announced plans for sub-stores in Georgia and Ohio.

Rich's of Atlanta, on the other hand, will spend $5 million to construct a new eight-story downtown building and will also enlarge its present building. Rich's, whose total business last year was the largest of any southern department store, expects sales to hit $50 million this year. Previous Rich expansion, completed in 1939, was scaled to an annual intake of $15 million.

Other expansion programs under way:
- Bullocks, Inc. will construct a new store in a park setting in Pasadena, Calif., feature indoor and outdoor tea rooms, a restaurant and roof garden.
- Meier and Frank, Portland, will develop a square block into offices and selling area.
- Neiman-Marcus of Dallas will establish branch units in Los Angeles, Houston and Amarillo, expand its present store.
- Miller and Rhoads of Richmond, Va. will construct a new twelve-story building on the site of its present four-story store.
- The Hecht Co. of Washington, D. C. will build a $2 million branch store in Silver Springs, Md.
- Foley Brothers, Houston, Tex., will complete a new $9 million downtown store with an adjacent half-block garage and service building.

Never has the department store business been so promising. While other business indices quivered under the hall of last month's stock declines, department store sales were up to record totals. The prospect of a buyers' strike had so far failed to materialize. The Federal Reserve Board reported that sales were 48 per cent over a year ago. And 1945 had already scored a record peak—nearly twice as high as 1939.

Other signs were not wanting. One preview of the size of the department store future: quick-thinking Walter Hoving, who resigned his job as president of Lord & Taylor early this year, took steps to launch a chain doing a total business of $200 million, and got the backing of Wall Street's sage Blyth & Co. As its first move, the new Hoving Corp. bought controlling shares of Manhattan's tony Bonwit Teller.
BUILDINGS by Louis Sullivan are arresting even today for boldness and clarity of design. The Carson, Pirie & Scott store in Chicago (left) is one of his most influential works. In spite of its complexity this building was executed with a strength and precision not equaled for many years. Its basic unit is the horizontally elongated “Chicago window” coinciding with the steel skeleton, defining the neutral balance of cage construction. The rounded corner, with its reminiscence of the pavilion, was added at the clients’ insistence. Sullivan’s skyscrapers emphasize vertical tiers, glory in height. Below, right, is the Wainwright Building, first Sullivan skyscraper, built in St. Louis in 1890. The Schiller Building, left, has cupola and heavy cornice. Toward the end of his life, Sullivan designed a series of small banks, remarkable for structural dignity and vivid ornament. At top, left, National Farmers Bank, Owatonna, Minn.

SULLIVAN REMEMBERED
Boston pays tribute to its greatest architect.

Early last month the snickering Muse of History ran down to Boston to enjoy an old joke. As countless times before, men had got around to honoring greatness a generation late. In laggard homage to Louis Henri Sullivan, Boston architects posted a plaque marking the birthplace of the man “whose stalwart and vital achievements mark the beginning of an independent architecture consistent with the normal creative spirit of men and the free aspirations of the people of America.” As this praise came at first from the Boston Society of Architects and the Mass. State Association of Architects, the Boston Herald, with New England intrinsism, reported: “Obscure Boston architect of 90's honored.”

Sullivan died in 1924. For monuments he already had the Wainwright building in St. Louis, first skyscraper to express its structure in its design, and the Carson Pirie & Scott Department Store in Chicago, purest early expression of modern steel cage construction. It was he who phrased the much misunderstood sentence, “Form follows function.”

At 30, with Dankmar Adler, he won the biggest commission of the day—Chicago’s monumental Auditorium, largest edifice ever to be set on floating piles. In 1893, many millions of persons who had never heard of Sullivan saw and remembered his Transportation Building at the Chicago Fair, a striking contrast to the pallid classicism of the other exposition buildings.

Sullivan had a haughty intolerance of an architecture that left “a banker sitting in a Roman bath, a Wall Street broker living in a French chateau, a rich vulgarian living in Trianon.” When skyscrapers shot up in the “Woolworth Gothic” manner, Sullivan spat out at them as “the rottenness of Gomorrah,” and called Wall Street’s pinnacles “a plague spot of American architecture.”

It was Chicago’s “White City,” however, which caught the fancy of junketing Americans and Sullivan, the original, was soon considered old-hat. In the last 30 years of his life he received only 20 commissions, chiefly for small banks which still bloom with an exotic brilliance on the Main Streets of small towns in the corn belt.

Sullivan’s only disciple, Frank Lloyd Wright, was not present at Boston last month. Many years ago he had said his piece on such things—the occasion: dedication of a gravestone monument to Sullivan. “It was their only best thought for the man now, but no monument is ever more than a monument to the men who erect it . . . Monuments are made by those who, voluntarily or not, never did anything but betray the thing the great man loved most.”

(NEWS continued on page 14)
LIGHTER... Total shipping weight only 63 pounds.

BETTER LOOKING... Handsome design and gleaming aluminum finish blend harmoniously wherever installed.

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In addition this cabinetry retains all the well-known advantages of Composite Construction—the warmth, the strength, the dependability, and the flexibility of hardwood and wood compositions—the quiet, easy action of steel drawers with hardwood slides and guides—the beauty and durability of factory-applied appliance-white finish.

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KITCHEN MAID CABINETRY
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NEW!

Operation Squatter
England invents a tactic.

Too many Americans saw eye-to-eye with Joe Whiteside of Chelsea, London, who told a reporter: "I had a sergeant-major for six years and I don't intend to let my mother-in-law take his place." When the "squatter movement" burst into ten days of magnificent illegality in London last month, sore-driven veterans and their families looked close at the radio photos as though they might recognize the faces of England's homeless. The discharged Yank who had laughed at English clothes, sniffed at English manners, misunderstood English humor—said: "By God, I see what they mean!"

In Brisbane, Australia, that same week, 100 veteran families moved into vacant military camps in the suburbs. In jampacked Ottawa, Canada, the Ottawa Veterans' Housing League led its members into empty Kildare Barracks, then smashed the gates of a naval training station, occupied a building, took over a former Canadian Women's Army Corps barracks at Lansdowne Park.

There was, as yet, small indication that Americans were ready to take so dramatic a course, though in Mission, Tex., 500 house-hunting veterans threatened to invade a surplus Army Air Field if their housing needs were not met. But it was—"something to think about. AVC leader Charles Bolte asked: "How low does veterans housing have to go before veterans become squatters?" And Congresswoman Clare Boothe Luce, deeply concerned, wired representatives of leading vet organizations suggesting immediate formation of committees from leading veterans' organizations to consult with Real Estate Boards and Rental Agencies on preventive action.

Back in London, however, traditionally law abiding Britishers were filing back to their bombed-out cellars and leaking attics in obedience to court eviction notices. From the Duchess of Bedford House in the swank West End, came 200 men, women and children. Squatters trickled out of the 620-room Ivanhoe Hotel, Regent Park's Abbey Lodge, and from unused army barracks buildings in the country.

The British Communists had given a Bastille Day flavor to things, lending their lock-step leadership to organizing the occupation and the evacuation of the vacant government buildings. Prime Minister Attlee, in a Bourbon mood, threatened to prosecute Communist leaders for "criminal conspiracy."

It appeared that the squatters had made their point just the same. Meeting in a special cabinet meeting the government promised drastic action on Britain's bitter housing shortage, a program to house 200,000 in some 700 unoccupied camps.

(NEWS continued on page 16)
It's time for plain talk about home buying

Are you considering a deal on a home? A bigger, nicer house for your growing family ... or an all new wonder-home ... or just anything with a roof that you can call your own? Take sixty seconds, please, to review the common-sense rules of home buying—reprinted here as a friendly public service.

Nobody could know better than we do how desperate you are to get those papers signed. Yet we say to you earnestly: take time for one long, slow, careful thought before you sign. And to safeguard your money, your home and your happiness, abide by these time-tested rules:

1. Don't Buy "Over Your Head". You simply can't make it good business to assume a $15,000 mortgage on a $3,000 income. The debt you take on should be not more than two-and-one-half or three times your present or anticipated annual income.

2. Don't Make Monthly Payments Too High. If you make $300 a month and pay $125 on your contract, the law of averages says you will lose your home. A good, safe rule (proved by our own experience of more than a half a century) is—not more than 25% of your monthly income for principal, interest and taxes.

3. Pay Down As Much As You Can. The bigger the down payment, the more interest you save. On a $9,000 home, paying $47.51 monthly, you actually save $1,317 in interest by making a $3,000 down payment, as compared to $1,500 down. And you own your home five years sooner.

4. Get Professional Advice from your mortgage banker, lawyer, architect, contractor and realtor on matters involved in buying a home. It's too big a deal—and too technical—for any amateur guesswork.

Viewing every application in the light of those rules, Investors Syndicate is currently making real estate loans amounting to about two million dollars every week. If you want personal help, it is available through our loan correspondents located in principal cities of the United States and Canada. Write us, if you wish, for the name of our correspondent nearest to you.

INVESTORS SYNDICATE
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Did you happen to see this ad in the Sept. 2nd issue of Life? We thought you'd be specially interested in "Rule No. 4".
The third hinge on every door in a home of twelve to fourteen doors would add very little to the cost of the hardware—but it would be hard to estimate the money it might save by preventing later repairs and replacements, and the annoyance, dissatisfaction, inconvenience and trouble it will avoid for the home owner.

"Three hinges to a door" throughout the house will assure free-swinging doors, with no sagging, sticking or warping—latches and locks that stay in perfect alignment and that operate efficiently...easy-moving doors that remain in good condition for the life of the building.

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"Three Hinges to a Door"

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**McKinney MANUFACTURING COMPANY**

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**CITIES**

**WANING PROPERTY TAX**

Cities are switching to new revenue sources.

Property taxation, mother milk of cities, is going dry. Such was the clinical conclusion of the Governmental Research Association. Its recommendation, for a hungry generation of municipal governments—fortified bottle-feeding from new revenue sources.

The Association's prescription came last month from sea-breezy Magnolia, Mass., where representatives of over 150 taxpayers' and government research groups met for their 32nd annual conference. Trend-conscious members from Los Angeles to Boston reported that government expenses were now up to 35 to 50 per cent since prewar days; tax sources thinning.

With a 200-year-old instinct, cities have been nursing hard on their oldest source of revenue, the tax on real estate. Los Angeles has raised the tax rate to record levels. Reported N. Bradford Trenham, general manager of the California Taxpayers' Association, "The taxpayer in Los Angeles can expect, in the 1946-47 fiscal year the highest property tax he's ever paid. It will be $6.50 for every $100 of assessed valuation." Other cities have boosted income by reassessment: San Francisco property has just been reassessed upwards by some $11 million.

Magnolia's experts warned: 1) taxes on real property have just about reached the load limit; 2) suburban building activity is almost certain to send the value of city property nosing down again; 3) the main repositories of modern wealth are no longer land and buildings.

Some cities have already found that taxes on sales, income and public utilities, and on such sundry taxables as sewage-disposal, theater-seats and vending machines, were quite as nourishing as the old property tax. Growing rapidly in popula-

larity were such new taxes as the admissions tax, (under which Philadelphia gained $1.5 million in 1944); the gross receipts business tax, (by which New York will gain $23 million this year); the retail sales tax (which yields the city of New Orleans 40% of its total revenue). In recent months, Toledo and St. Louis have followed Philadelphia in adopting the income tax, calculated to charge the city's "daylight citizens", with some of the cost of city government.

The average city still relies on the property tax for some 65% of its revenue but Seattle has shifted its dependence away from real estate so that only 36% of the city's income comes from real property; Birmingham's reliance is now only 41%; Washington, D. C.'s 42%; Denver 43%; Milwaukee, 52%.

Said Henry W. Connor, director of the Newark Bureau of Municipal Research: "During the past year there has been so much experimentation with new city revenues that this period may come to be known by future historians of cities as that in which the cities broke away from a main dependence on the property tax."

**AS MIAMI GOES...**

So goes the boom.

For many months now, modest vacant lots with seashore frontage on the Gold Coast from Palm Beach to Miami, have been good for $25,000. Little houses, thrown up a few years ago for $6,000, have gone for $17,500 in ready cash. In the three months ending June 30, some $35 million worth of property changed hands in the Miami Beach area.

In Florida real estate circles, where the word "boom" is a breach of decorum, (recollection of the collapse of '26 is still painful), this runaway market is both feared and loved. There are those who say Florida is already on top of a head-on smash calculated to make the last one look mild as a kitten. And there are the partisans.

(NEWS continued on page 20)
WHETHER you're modernizing your old office or building a new one, three important considerations always pop up. They are modern lighting, air conditioning (if the budget permits), and the type of acoustical material that will provide ample noise reduction. This last is where we come in.

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There are no store-houses at the Homasote Mills. Winter or Summer, the big sheets of Homasote are piled outdoors. When needed, they are trimmed to size—as big as 8' x 14' or as small as 4' x 4'—and are immediately ready for shipment. This has been standard practice for more than 30 years. It is the behind-the-scenes evidence that the Homasote Company know their product is weatherproof. No similar product can be treated this way.

Pan American Airways was building an over-seas base in an equatorial Turkish bath—the average temperature 95 degrees F., the average humidity 90 percent—the annual rainfall 170 inches! Homasote—tested and then used for the interior walls—convincingly proved its ability to withstand moisture and mildew.

Admiral Richard E. Byrd used Homasote in the construction of Little America. Six years later he reported that the Homasote boards were "just as good as when they were put on".

Hundreds of letters from owners—in all parts of the world—testify that Homasote homes and buildings have come through floods, snow, tornadoes, hurricanes and even fire—with little or no damage.

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Today the demand for Homasote exceeds the supply. In spite of expanded production capacity, our entire output for the balance of this year is already under allocation. Looking to 1947, however—we invite architects and builders to write for our new fully illustrated booklet describing some of the many uses for weatherproof Homasote. The book gives physical characteristics, performance charts, specification data and application instructions. Write for your copy today.

HOMASOTE COMPANY, Trenton 3, N. J. who say that Florida's present joy-ride "is different," based on real demand rather than on speculation, on ready cash and lefty down payments instead of the early carnival of ten percent down and two to five-ply mortgaging.

Last month, Merrill Lynch, Pierce, Fennec & Beane, the country's most Argus-eyed broker (90 branches), turned its gaze on Florida and came up with an "outlook" report in its widely-circulated "Investor's Reader." In sibylline tones, M. L., P. F. & B. observed: "In the early twenties Florida real estate went through one of the most fantastic booms in U. S. history. Thousands of unformed citizens speculated crazily; elaborate 'developments' were projected where God had sown only sea weed, sea oats and cabbage palms. In 1926-27 the boom collapsed. Economists differ as to how this affected U. S. economy. But the fact remains that a nationwide depression started less than three years later."

Was Florida—and national—history about to repeat itself? Surveys showed that most realty prices throughout Florida had tripled since 1940 and are at least five times depression lows. A real estate broker in pint-sized Clearwater expected to total $11 million in sales before the year ended—he had done a $500,000 business in 1938. In Fort Lauderdale, a community of some 26,000 "permanents," 40,000 "visitors," a $50 million yearly business was in sight.

The pulse of sales was most feverish in beach-and-lake-front holdings along Florida's 3,500-mile shoreline and 30,000 lakes. Along Daytona's beautiful ribbon of shingle, frontage sells for $400 a foot; at Indian Rocks, a realtor sold 104 lots at $500 to $1,250 each even before the dredge had pumped the land up from the Gulf tidewater. All types of property were riding high: grovelands up to $3,500 an acre; hotels zooming out of receiverships into snappy best-sellers at four times their replacement cost.

Local Florida has argued that under its durable prosperity. Much of the bloated spending of the winter season, Floridians point out, is the work of spendthrift visitors, the resort crowd that left millions in slot machines and paid $15-293,294 in racing taxes this year. Real estate, on the other hand, is grounded on such substantial elements as a growth in population and industry and a real housing need. Cheeriest fact in the current situation, perhaps, is that cash purchases are almost the rule, second mortgages rare; big insurance companies like Metropolitan and Prudential have been combining the state for first mortgages on prime business property.
But folks didn’t get a horse... instead, they bought more horseless buggies. They quickly found that they provided a better and faster means of transportation. People used to climb stairs to transact business too. Now, modern vertical transportation is insisted, not accepted. In the competitive days that are surely coming, the full buildings will be the ones which provide the best in this type of transportation.

Part of this modernization calls for attractive elevator entrances. And that, we believe, calls for a full knowledge of what Dahlstrom has to offer both Architects and Building Owners. If you are faced with a job of this kind, we suggest that you give us an opportunity to contribute something from our Forty years experience which may be helpful. We can point—if you’ll pardon us—to hundreds of the finest buildings in the country which have been equipped with Dahlstrom Elevator Entrances.
To get some idea of how light Koylon Foam really is... you have to think in terms of a substance like angel food cake.

Actually, Koylon Foam is 85% air... captured in millions of tiny, interconnecting cells of resilient latex.

This helps to solve the weight problem in airplane design. It lightens the task of housekeeping in homes, hotels, hospitals and schools... where merely "turning the mattresses" becomes a Herculean task.

With no springs—no stuffings—to wear out... Koylon Foam lowers maintenance costs. Eleven years of use on major railroads proves that Koylon Foam adds to seat upholstery life!

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When can you get it?

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3 PERFECT FILLING — Highest quality silex filler is rubbed into wood as flooring moves down the finishing line.
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Please send me the Sunspotter Chart for: 30 □ 35 □ 40 □ 45 □ Latitude, [specify other latitudes for later delivery] in Plastic—$10.00 □ on Bristol $3.95 □.

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NO SMOKING
Pittsburgh puts smoke ban into effect.
Time out of mind, it seemed, Pittsburgh has suffered the opprobrium of being America's grimmest city. Pittsburgh prosperity, signaled by soot-belching furnace stacks, covered the city’s buildings with a uniform black, made housekeeping terrifying to young wives, shrouded the sky with a special Pittsburgh phenomenon known as “smog”—one-third smoke, one-third fog, one-third sinus trouble.

Plans to rid Pittsburgh of its pall have ranged from a proposal to erect huge fans to blow the smoke over Duquesne Heights and out of town, to a scheme to banish smoke by educating all users of furnaces in methods of careful firing. Most practical program is that conceived by the United Smoke Council, which has urged an anti-smoke law to control all of Allegheny county's hundreds of soot-breathed mills.

First phase of the long-awaited campaign for smoke-elimination begins on October 1, when strict regulation is applied to all commercial and industrial establishments in the city. Pittsburgh's smoke ordinance, passed in 1941, and modeled after that of St. Louis, will eventually make it illegal for any furnace or stove to produce smoke by requiring either a smokeless fuel or mechanical equipment that will choke off smoke. In addition to policing the skyline, the new Bureau will exercise authority when new heating equipment is installed or major repairs are made in existing units. Detailed plans must be filed by the owner, and inspection made by a smoke inspector. Delayed because of the war, the plan will be put into operation in two stages. During the second stage, it will place all remaining fuel consumers—chiefly home-owners—under the regulations now applying to large buildings. By next October, every building in Pittsburgh will be the concern of the Bureau of Smoke Prevention.

Pittsburgh officials admit that it will take more than two years to get satisfactory compliance with the anti-smoke rule. St. Louis inspectors, checking industrial chimneys in the first winter of the smoke ban, found that 21.6 per cent were still puffing illegally. But last year only 5.6 per cent sent up law-breaking smoke. Forseeing such a day for Pittsburgh, the Press caroled last month, “You will waken to the realization that Pittsburgh is a really clean city..." As you get up to shut the window down in your yard you will see evergreens in your bedroom, you will note that there is no deposit of soot on the sill. As you look down in your yard you will see evergreens that wouldn’t grow there before... Downtown the tall buildings will gleam in the sunlight.”

NEWS continued on page 28)
Kimpreg* + Plywood
a new material with new advantages

PERMANENT SURFACING. Now Kimpreg gives plywood a face of plastic armor. A thermosetting phenolic resin laminate, Kimpreg provides a flint-like waterproof surface that defies parasites, decay and extremes of temperature. It is washable, insoluble, stainproof. Impervious to alcohol.

WEAR-RESISTANT, SCUFFPROOF. Kimpreg is a sheath of enduring beauty. It's durable — withstands hard use and abrasion without showing appreciable signs of wear! Kimpreg increases the abrasion resistance of plywood up to 5 times when dry, up to 33 times when wet.

VERSATILE, WORKABLE. Kimpreg + Plywood is a new material with the versatility of a plastic plus the economy and basic workability of plywood. Find out more about Kimpreg + Plywood — an amazing new product with a myriad of possibilities. Mail the coupon today for complete book of information.

Kimberly-Clark Corporation, Neenah, Wisconsin. Please send me the new free book on Kimpreg and its uses.

AF-1046

Name ____________________________
Firm ____________________________
Type of Business ___________________
Address __________________________
City, Zone, State ____________________
Always a problem because of the severe use and abuse they receive, toilet facilities in service stations can be greatly improved by the use of direct flushing valves — Watrous Flush Valves.

These valves are rugged and durable — are fast and economical in operation — provide strong flushing action assuring a clean and sanitary bowl — are not subject to tampering — offer remarkable freedom from servicing — assure maximum savings of water.

In hotels, depots, service stations, schools, public buildings and other places where toilet facilities are subjected to severe service, Watrous Flush Valves have proved themselves a source of satisfaction over the years. In planning new, modern service station restrooms, you will gain many important advantages through the use of Watrous Flush Valves.

All Watrous Flush Valves Offer These Important Advantages for Service Stations

1. Easy to operate. Fast, powerful and thorough in action.
2. Rugged and durable — will withstand severe use and abuse.
3. Practically foolproof and theftproof — not subject to tampering.
4. Cost much less to maintain because they have no parts subject to breakage — fewer parts subject to wear.
5. Occupy less space. Promote better sanitation because they make cleaning easier.
6. Provide important savings of water through ease of adjustment to the actual water needs of the fixture.
7. Silent-Action equipment can be furnished when desired.

THE IMPERIAL BRASS MANUFACTURING COMPANY
1238 W. Harrison St., Chicago 7, Illinols

For complete information on Watrous Flush Valves see Sweets' Catalog or write for Catalog No. 448-A.
Did you miss this announcement in 1944?

IT'S STILL NEWS!

Early in 1944, after fourteen years of research and development, Libbey-Owens-Ford announced Thermopane*. Although this was the first public announcement of the windowpane that insulates, Thermopane already had been proved by years of service in hundreds of actual installations.

Since its public announcement, Thermopane has captured the imagination of architects, builders and homeowners...has become one of the most talked-of advancements in the building industry.

Why do we refer to this advertisement now? Because everything we said about Thermopane has been borne out by the tremendous demand.

All of this adds up to one fact—you can install Thermopane with complete confidence...for time has added its proof to laboratory promises. Thermopane has proved itself in homes, schools, hospitals, offices and public buildings...in the United States, Mexico, Canada, Alaska and even Iceland.


THERMOPANE'S metal-to-glass Bondermetic Seal bonds the panes into one unit. This hermetic seal guards against dirt and moisture entering the dry air space. Thermopane is made for most window openings...and in 50 standard sizes for simplification of design and replacement. Write for our booklet on Standard Thermopane Sizes. Libbey-Owens-Ford Glass Company, 35106 Nicholas Building, Toledo 3, Ohio.
Owners who have had experience with Murphy Cabranette Kitchens know their minimum of upkeep cost.

Exposed surfaces are of genuine vitreous porcelain . . . never require painting . . . are restored to original gleaming beauty with only soap and water.

Ranges and refrigerators are made to meet the expected abuse of tenant usage. They are the only kitchens of their kind in all the world . . . unequalled for small apartments.

For catalog of models in current production and for name of nearest representative . . . write today.

Dwyer Products Corporation
Dept. 1046 Michigan City, Indiana

LABOR OUTLOOK

Door opening to apprentice training.

Labor Day, 1946, found building still bucking limiting factor No. 1—the materials shortage. By spring, Expediter Wyatt warned, builders would have supplies licked, but then the industry would run into its No. 2 barrier—lack of sufficient workers to turn materials into houses.

To meet next year's housing goal, NHA figured 2,500,000 skilled workers would be needed, some 750,000 more than the number currently employed in the construction industry. Yet the prospects of any considerable increase were slim—not more than 65,000 men are now training under union apprentice contracts.

National shortages were most cramping in the trowel trades, bricklaying and plastering, and there was a serious shortage of carpenters. Local bottlenecks showed up in the count of other skills: in San Francisco, for example, painters were hardest to find.

Housebuilding is likely to encounter particular discomfort when government relaxes its hammer-lock on big commercial and industrial projects. Labor, like materials, flows to the readiest channel when in short supply. Workers tend to put big jobs ahead of housing, since non-residential work is traditionally higher paid and more continuous, and prefer repair and maintenance assignments (indoors and less grueling) to new building.

Training Breakthrough. Everyone remembered that during the war we had tackled a huge cantonment and plant building program and attracted 2,500,000 workers into the building field at a time when a large number of experienced building tradesmen were either in the army or other industries. The formula used was at once simple and enormously difficult. It had meant abandoning the mortised ratio of journeyman to apprentice, utilizing the semi-skilled and the unskilled, equalizing wages according to job performance.

Like many a war-born advance, this procedure was largely jacked with resumption of "business as usual." Last month in St. Louis, however, unions and builders reached an agreement which recalled wartime flexibility. Recognizing that many returning veterans had received carpentry training in the services, the St. Louis Carpenters' District Council agreed that competent men be paid a third or fourth year apprentice wage, at the employer's discretion. The National Wage Adjustment Board ruled that such subjourneyman classification was permissible, instructed the unions to list veterans on their books as apprentices of from one to four years' experience. Graduation to the fifth year, or journeyman scale, could be achieved by a veteran who had served only (NEWS continued on page 32)
Not just lighting - but Ceilings Unlimited

THE MILLER FLUORESCENT TROFFER LIGHTING SYSTEM for stores, offices, schools, factories, and public buildings is an important advance in lighting. The backbone of this system is the patented Miller Ceiling Furring Hanger which suspends ceilings from the lighting system — does away with laborious fitting of recessed lighting into hung ceilings, cuts needed supports from structural ceiling 50 to 75%. Has its own wireway which reduces wiring costs up to 50% ... conduit and conduit fitting costs up to 80%.

MILLER FLUORESCENT TROFFER LIGHTING SYSTEMS provide not just lighting — the best seeing light — but provide the means for interior improvement — CEILINGS UNLIMITED.
Announcing the

New AMPRO

SLIDE PROJECTOR

with the features you have always wanted

Has Important Basic Improvements

This new AMPROslide projector (2" x 2") embodies the engineering skill and fine precision craftsmanship that have made Ampro 8mm. and 16mm. projectors world famous for quality. It offers features that guarantee quick, simplified operation - and long satisfactory service, including:

Automatic snap-action, self-centering slide changer, with patented features that assure hairline focus, perfect alignment of slides on screen, interchange of glass and ready mount slides without refocusing. Operates with one hand - fingers never touch slide surface. Convenient case lifts off in a flash for easy accessibility.

F 3.5 anastigmat projection lens. 5" focal length with convenient knob for hair-line focusing.

New condenser design that combines maximum brilliance with cooler operation. 300 watts of uniform light with effective heat dissipation and minimum light loss.

Pointer aperture permits use of pointer with slides. Attractively finished, compact, sturdy with clean flowing lines and controls and parts readily accessible. The ideal projector for brilliant full color or black-and-white 2" x 2" slide projection.

Write for special Amproslide circular giving full specifications and prices.

AMPRO SLIDE PROJECTOR

Model "30-A"
(2" x 2")

AMPRO CORPORATION * CHICAGO 18, ILLINOIS — A General Precision Equipment Corporation Subsidiary
The principle of **Vertical Lift** in doors has several distinct advantages which are quickly seen.

The door nests directly above the opening, completely stored away and out of the way when it is open. This leaves the ceiling, walls, floor and approaches absolutely unobstructed. Overhead equipment can come right out to the main truss.

You have no problem with sand drifts or a sagging roof caused by snow. The doors are unlimited in height and width and number of sections.

Even a ground swell caused by frost will not jam the Vertical Lift Door. If ground slope is uneven, the lowest section can conform.

The Door is fully counterbalanced and opens electrically or manually. The largest of these doors can be opened in one minute. Smaller sizes, now in operation, open in less than ten seconds.

All leaves reach the top at the same time, but, to save heat, they can be stopped at any point. There is also a safety device available which stops the door if it touches an object.

Divided Doors need not have obstructing side members. Independent doors can be raised to give the effect of one large opening.

Details of skin material and windows, heat and sound insulation and sliding pilot doors are arranged to specification.

**Robertson Vertical Lift Door**

The principle of Vertical Lift is simple and gets around the difficulties usually encountered in industrial doors. Robertson engineering is so flexible that this door can be harmonized into your specifications with a great degree of adaptability. Any Robertson representative will be glad to furnish you data. For Door Literature, write to:

**H. H. ROBERTSON CO.**

2403 Farmers Bank Bldg.
Pittsburgh 22, Penn.

Offices in 50 Principal Cities
World-Wide Building Service
Here’s a proved system of interior construction that offers complete flexibility to meet ever-changing educational needs

THINK OF IT! . . . the entire interior of a school completely flexible, yet having all the necessary qualities of permanent and solid construction!

Think what that means in terms of economy alone . . . when you want to expand or subdivide units, or convert a building from academic to vocational, or from grade school to junior high!

Three Johns-Manville materials make this revolutionary development possible . . . permit Unit Construction of walls, ceilings, and floors under a single specification, a single manufacturer’s responsibility:

1. Movable Walls . . . 100% salvageable. Made of Transite sheets—difficult to mar, highly resistant to shock and abuse.
2. Acoustical Ceilings . . . reduce noise, increase classroom efficiency. Demountable units can be taken down and relocated as desired.
3. Colorful, Resilient Floors . . . quiet to walk on; easy to clean; stand up under heavy traffic. Small units permit easy extension of the floor to meet changing conditions.

The constituent parts of Johns-Manville Unit Construction are built to last as an integral part of the structure. And they’re so much easier to keep clean that they bring maintenance expense way down. Their modern attractiveness inspires genuine pride on the part of students, teachers, and parents.

Before planning a new school or converting an old one, write for our brochure describing this important step forward in school design. Johns-Manville, P.O. Box 290, New York 16, N.Y.

Because of the unprecedented demand for Johns-Manville Building Materials, there may be times when we cannot make immediate delivery of the J-M products you need. We therefore urge you to anticipate your requirements as far in advance as possible.
ACOUSTICAL CEILINGS—Important factor in helping to overcome the handicap of distracting noise, Johns-Manville Acoustical Ceilings are beneficial both to teacher and student alike. They give the desired degree of quiet for effective teaching, eliminate frequent causes of nervousness, and are proved aids to concentration. An exclusive Johns-Manville patented construction system permits interchangeability of flush-type fluorescent lighting and acoustical ceiling units, which are readily demountable.

MOVABLE WALLS—The keystone of flexibility in Unit Construction is the J-M Transite Wall. It can be assembled and relocated as educational needs require. One-unit rooms, for instance, can be speedily converted into two-unit rooms, or vice versa. Made of fireproof asbestos and cement, practically indestructible materials, the movable panels are used to form rigid, double-faced partitions, 4" thick. Can also be used to finish the interior of outside walls. Transite base is easily removable for access to wiring, etc.

COLORFUL, RESILIENT FLOORS—J-M Asphalt Tile Flooring completes the Unit Construction System. Made of asbestos and asphalt, the units withstand the kind of hard wear and abuse that must be expected in any school building. Not only is it durable, J-M Asphalt Tile Floors are also comfortable and quiet underfoot, reducing the disturbing effects of noisy footsteps in corridors, gymnasiums, etc. Individual units permit easy alterations or extension of patterns, made in a wide variety of plain and marbled colors.

Incredible as it may seem, this beautiful and solidly built Vocational Room can easily be expanded, subdivided, or converted to an ordinary classroom—thanks to the flexibility of Johns-Manville Unit Construction. Note the projection-free lines of the movable, hard-to-mar Transite Walls. And note the Acoustical Ceiling (with fluorescent lighting), which cuts down noise and reverberations that would otherwise distract students and teachers in other rooms. The colorful floor is Asphalt Tile, easy to clean, highly resistant to scratching, yet resilient underfoot.
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.
The metal parts of farm machinery, equipment, structures and installations are constantly exposed to the elements that are the cause of rust and corrosion. Hot-Dip Galvanizing definitely seals out these causes because it seals in the metal.

MOLTEN ZINC applied to metal by the Hot-Dip Galvanizing process provides the utmost protection against rust. Because, through the high temperatures involved, this process creates a fusion of protective zinc with the base metal.

Only Hot-Dip Galvanizing creates a bond of iron-rich alloy which holds the best possible coating of protective zinc to the metal, sealing out the causes of rust and corrosion.

Time-tested and proved under climatic conditions in all parts of the world, Hot-Dip Galvanizing has long paid its way in providing longer life, greater uninterrupted service, and in effecting savings by averting costly replacement and maintenance.

Zinc is a fighter. On a steel sheet it plays a protective role and combats rust. But it also fights paint. It dries out the vital oils and causes premature peeling and flaking. Result: early and costly repainting.

But this doesn't happen when you use ARMCO Galvanized PAINTGRIP Steel. Weather exposure tests prove that paint lasts several times longer on PAINTGRIP gutters and downspouts, air-ducts, furnace casings, and other equipment than on ordinary galvanized or uncoated steel. That's because the mill-Bonderized surface insulates the paint from the raw zinc, and helps preserve its life and beauty. And remember, PAINTGRIP actually costs less than it does to use ordinary galvanized steel and acid-etch before painting.

ARMCO Galvanized PAINTGRIP can be specified with an ARMCO Ingot Iron, Copper Steel or Open Hearth Steel base. In every case it assures longer lasting, better looking sheet metal work. This means satisfaction for the owner and good-will for the builder and architect. The American Rolling Mill Company, 3771 Curtis Street, Middletown, Ohio. Export: The Armco International Corporation.
You can create an endless variety of custom-styled store front designs with the K-47 Line of store front metals, because its members are interchangeable and they also serve multiple uses.

A typical example of K-47 interchangeability is illustrated in the upper panel at the left. It shows a few of the many face members which are used with this same gutter assembly. And an illustration of the multiple uses of a K-47 member is shown in the lower panel.

These two outstanding features enable you to obtain unparalleled flexibility and freedom in designing a limitless number of distinctive store fronts.

They also reduce drafting expenses, since you can use the elements of a good design more than once and obtain new effects with K-47 interchangeable members. The use of a standard assembly for each type of construction simplifies installation and minimizes the costs of job supervision.

For details of the striking new K-47 Line and the Kawneer Standard Line, fill out and mail the coupon below.
"I've decided on Hartford Saxony for this lobby... and I'll sure wait for that."

"These Bigelow carpets gave me real service. I'll stick to the same patterns."

"For years I've wanted rich, new textures like these... so I won't mind a little wait now."

"I can save both installation and maintenance waste with Bigelow Lokweave. That's what I want."

...It's worthwhile waiting

Bigelow carpet production is getting back to normal... and orders will be filled. Now's the time to plan redecorations. Ask your dealer about Bigelow's Carpet Counsel. It's an old, free service to save you time and money.

BIGELOW-SANFORD CARPET CO., INC.
140 Madison Avenue • New York 16 • N. Y.
Helping to Break the Bottleneck

Sheetrock*, the fireproof wallboard, is one outstanding material that lends itself to fast, easy application in these days when housing for 4,000,000 people is needed so desperately. These big panels cover up to 48 sq. ft. of wall or ceiling at a time, are quickly cut and fitted. Then Perf-A-Tape® Joint System “welds” them into smooth, trouble-free surfaces. Even faster for remodeling is Bevelled Edge Sheetrock; it can be decorated as soon as the last nail is in. And Sheetrock is made of gypsum, a mineral which cannot burn. This versatility is the reason why the demand for Sheetrock still is greater than the supply. But more and more is being produced every month...we are close to record-breaking volume. Large Sheetrock book of complete data available. Write to 300 W. Adams St., Chicago 6, Ill.


United States Gypsum
For Building • For Industry
Gypsum • Lime • Steel • Insulation • Roofing • Paint
Spraddle-legged cover girls... Allen at last... Veterans' housing miasma... A plea from Italy... Cut-rate homes... The Bank of America vs. the insurance companies.

GRASS ON MAIN STREET

Forum:
Mr. Lamanita's whimsical August cover, "Grass on Main Street," is—well, novel! But I'm hesitant to say "I like it!"

A. L. LONGWORTH
New York, N. Y.

Forum:
How many shots of rye did the person—he could hardly be called an artist, probably not even a draftsman—have before he perpetrated the atrocious cover on the August issue of the FORUM entitled "Grass on Main Street, Rye, N. Y.?

As chairman of the Planning Commission of Bristol, Va., I can thoroughly appreciate your article on the Shopping Center of Rye, N. Y. It is timely, thoughtful and well presented, except for one thing. Why, in the name of all that is beautiful, did the person who drew the perspective populate the streets with all those missapen, spraddle-legged abortions? It is an insult to Rye! If the people of Rye bore the slightest resemblance to these creatures—and I am sure they do not—I hope I am never called on to go there. Your cover, I presume, is intended to show the beautiful effect that would be secured by having velvety green grass and spreading shade trees in the streets in place of asphalt. But what does it show? Horribly deformed, three-toed monstrosities unrolling what looks like Cyclone Fencing over what purports to be green grass! Even Lucy, our office secretary, wanted to know how the heck they would mow the grass.

Why is it that so many recent drawings depicting architectural subjects have to be desecrated with grisly, writhing apparitions presumably representing human beings? If the modern delineator cannot draw a reasonable facsimile of human beings—for Pete's sake, let him leave them out entirely!

I have been a subscriber to your magazine almost continuously from the time when you were known as the Brickbuilder, and that is a long time, believe me! In those early days it was a pleasure and an asset to have copies of your magazine on the table in the reception room, where its dignified and attractive cover gave some indication of the material to be found within. But, if the cover of your August issue is any indication of the contents, no one would want to leave such an idiotic publication where a client could see it.

If you are so short of help that this cover is the best you can do, let me know and I will ask my four-year-old grandson to do it for you. I am sure he could do a better job blindfolded and with one hand tied behind him.

Whew—I'm glad I got that off my chest! CLARENCE B. KEARFOOT, Architect Bristol, Va.

Feel better?—Es.

ARCHITECT'S FORUM

Forum:
Your August issue was a very pleasant thing. It looked like—and was—an architects' magazine, which usually had not been the case. Please do it more often.

HARRY LUCHT, Architect West Englewood, N. J.

FORUM'S audience is industry wide including many architects.—Es.

ALLEN'S ARCHITECTURAL KIDNEY

Forum:
Naturally, when I read the letter from Ernest Kremers of Niagara Falls in the August FORUM ("Show us some examples of Allen's work. Let's have a look at the stripe of his architectural kidney.") I communicated with my lawyers, the well-known firm of Moth, Eaton and Riddled. "Can a guy from Niagara Falls claim that I have a striped kidney and get away with it?" I demanded. Unfortunately, the words "Niagara Falls" reminded Mr. Riddled of the anecdote about the fellow who remarked, "I've been at more first nights than anybody in America."

"You a dramatic critic?" inquired a bystander.

"No; I'm a bellboy in a Niagara Falls hotel."

This left me no further advanced than I was at the beginning. I still do not know if Mr. Kremers wants to look at my buildings or at an X-ray of my kidneys, but since the latter would be depressing viewing, I am sending you a photograph of a building at the Michigan Veterans' Facility that we just completed plans for.

I realize that the FORUM will not like this design but I can't help it. I told Gus Langius, the State Director of Buildings and Construction, that I wished to steal a few ideas from Frank Lloyd Wright's Museum of Non-Objective Art. Of course, I would improve on it. We would have the spiral leading from the top floor but it would be steeper, so residents of the building, wearing roller skates, could whiz down all three floors signing pension applications as they went. He shook his head. I then proposed to abandon the Wright spiral as too old-fashioned and substitute the Allen frog-in-a-well chute, designed so that every time you slide down one foot you come back up two. The only way you could get down cellar would be to start for the elevator penthouse. Mr. Langius said this idea was no good or Mr. Wright would have done it himself. I then got angry and designed the building as you see it.

Of course, I could send you some photos of the work we are doing at the Central Michigan College of Education. I could, but why set off a wave of mass suicides in the FORUM office? These buildings (don't say I didn't warn you) are Gothic in design. Can you imagine the scene in the FORUM office when a photo of a building with any trace of Gothic arrived? (It would have to be smuggled in disguised as a shipment of reefer cigarettes.) Henry Wright flinging himself face down upon the accrued picture to blot it out before the young and tender eyes of any lady associates fell upon it; George Nelson gargling DDT to ward off infection and Howard Myers repeating that corny old gag of his about "In my youth I looked at so much Gothic I gotheic to my stomach." Several junior associates would laugh at this, gamely.

No, I would never do this to the FORUM. Or hardly ever.


Next month the Allen Kidney.—Avv.

CAPTIOUS CAPTIONS

Forum:
There are many things I like about the FORUM. However, it is very annoying now and then to see a supercilious criticism under a picture with no statement explaining your viewpoint and as if your opinion were final. Unless you explained it, I would not want my work in your magazine.

The present dark age of architecture is (Continued on page 40)
You aren’t in a temporary business . . .

Take a leaf out of the Army’s book . . .

The United States Army’s Corps of Engineers didn’t gamble on temporary roofs for flat decks.

During four years of war (and before) they were in the construction business on a gigantic scale . . . building and maintaining vast mobilization and training centers, posts and camps, airfields, ports of embarkation and debarkation, huge supply depots, etc.

The Army recognized the punishment roofs must take on flat decks—it specified tar and gravel.

War Department Technical Manual 5-617, a “bible” on roofing and re-roofing for U. S. Army Engineers, specifically states: “Built-up roofs are particularly adapted to relatively flat slopes because they furnish a continuous membrane, built-up on the job from layers of bitumen and bituminous-saturated felt. When properly constructed they require little maintenance. Coal Tar Pitch built-up roofs should always be used on decks where water may collect and stand.”

For peacetime structures, too, roofs need protection that will last. And the roofs that have records of 20, 30 and 40 or more years of satisfactory service are tar and gravel roofs.

If you are planning a new building or contemplate a re-roofing job for an existing structure insist on Koppers Old Style Pitch and Koppers Approved Tarred Felt. Koppers Company, Inc., Pittsburgh 19, Pennsylvania.

Refer to your Sweet’s Catalog or write us for complete specifications.
For floors of maximum beauty and service—MINWAX WOOD FINISHES

ON the basis of MINWAX Wood Finish service records over the past 30 years, MINWAX Flat Finish, when properly maintained, will retain its beauty and serviceability without rescrapping, as long as the building stands.

MINWAX Flat Finish is the original penetrative stainwax finish. It is truly scratchproof. The film of wax that protects the surface cannot chip and will not scratch white. An occasional waxing will maintain full serviceability. Any traffic-worn areas may be completely restored without visible laps by the application of a little more MINWAX.

The Ideal Low-Cost Finish! There is no dwelling, single or multiple, which need be without the advantages of MINWAX Flat Finish on its floors. MINWAX Flat Finish really saves money over the years through ease of maintenance and freedom from costly re-finishing.

For a floor finish that retains its beauty through the years, specify MINWAX Flat Finish. For further information see Sweet's or for complete specifications, write MINWAX Company, Inc., Dept. AF, 11 West 42nd Street, New York 18, N.Y.

For the 28th Consecutive Year OUR COMPLETE CATALOG IS IN SWEET'S

Assuming the average half-acre at 110 ft. width, which affords 220 ft. depth, it would be simple to extend sleeping accommodations in a north wing, 24 x 24 ft., an expedient which increases living-dining space to 24 x 28 ft., giving a 24 x 20 ft. bedroom as shown below.

This would leave 14 ft. between the neighbor's garage and your bedroom wall... and suggests the acre plot or staggering the layout to afford maximum individual privacy of two houses per acre.

Elaboration could include built-in cabinets, etc., except in the lower income brackets. But when the only evidences of a much-touted... ingenuity are those like Revere's postwar dream house, the Celotex version and U. S. Steel's double-page spread, the...

(Continued on page 44)
DRAMATIZE MERCHANDISE!

INTENSE SPOT-LIGHT AND FLOOD-LIGHT EFFECTS WORK MIRACLES WITH STORE DISPLAYS!

GUTH HY-LITERS, using 150-watt Sealed Beam Projector Lamps, provide novel, effective "accent" lighting for stores! HY-LITERS, easily adjustable through a 90° arc, are for full concentration on merchandise displays or in show windows, bring dramatic emphasis to modern retail merchandising.

HY-LITERS' exterior portions are finished lustrous 300° WHITE Enamel, and surface types are attractively trimmed with polished Aluminum flutings.

They're beautifully fashioned—the last touch in good store lighting. Write today for more details.

Two Types Available for ACCENT Lighting!

HY-LITERS may be had for either Surface or Recessed Mounting. Both types are suitable for use as individual units, or arranged in rows with GUTH FLUORESCENTS. HY-LITERS maintain the high engineering and construction standards of all GUTH Lighting Equipment, and are ideal for today's important ACCENT Lighting.

GUTH HY-LITERS ARE AVAILABLE NOW!

THE EDWIN F. GUTH CO. • 2615 WASHINGTON AVE • ST. LOUIS 3, MO.

Leaders in LIGHTING SINCE 1902
Better to live in, easier to keep in "shipshape" order—that's modern homemaking with Defoe's "Working Walls".* And Defoe will literally put your walls to work with expertly designed, built-in storage and utility units in addition to closets and wardrobes. The "Working Wall" illustrated here, for example, is one living room unit combining a heat-circulating fireplace with book cases, writing desk, radio-phonograph and plenty of storage space for your record albums, card tables and other accessories for home enjoyment. Send in the coupon today for your copy of the illustrated brochure which describes and illustrates other "Working Wall" units. It will also bring you architect's drawings of homes which can be built by Defoe's distinctive method of home construction.

Housing Division
DEFOE SHIPBUILDING CO., Dept. AF-10
BAY CITY, MICHIGAN

Please send me the descriptive brochure on the new Defoe Homes.

Name
Street
City and State

*TRADE NAME REGISTERED

DEFOE SHIPBUILDING COMPANY...BAY CITY, MICHIGAN
Fabrics woven of Firestone Velón*

are soilproof, practically wearproof

This room is a gay deception. It looks fragile as a cream-puff. But the whole family can romp in it—and laugh at soil and wear.

The upholstery, drapes, lampshades, trim are woven of Velón, Firestone’s wonder fibre that shrugs off dirt.

Grease and grime can’t cling to Velón’s non-porous threads. A whisk of a damp cloth restores its original beauty. Even the sheerest Velón defies abrasion and snagging, because each tiny thread is a single filament of giant strength. Velón’s gorgeous colors can’t sun-fade or wash out.

The finest cars, planes, hotels and restaurants are adopting Velón upholstery. Your best clients deserve this amazing new material. Specify it. Ask your regular fabric sources for samples.

FREE—Write Firestone, Akron, for your copy of the full-color Velón booklet.

LISTEN TO THE VOICE OF FIRESTONE MONDAY EVENINGS OVER NBC
Matched Sets
in metal trims for all floor and wall materials

A typical group of matching Chromedge sections.

* T.M. Reg.
U.S. Pat. Off.

* CHROMEDGE extruded aluminum alloy and stainless steel trims are made solely by The B & T Metals Company.

CHROMEDGE Metal Trims offer both extruded aluminum alloy and stainless steel moldings in a complete range of matched sets. Sizes for all materials, from lightweight enameled coverings to wallboard and plywood thicknesses. The matched set shown above is for use with 1/4-inch materials. Extruded sections may be had in bright or satin finish, or in the rich, velvet-like luster of B & T's remarkably durable Chromalite finish—which will not rub off black.

Distributed through authorized wholesalers only.

The B & T Metals Company
Columbus 16, Ohio

vet winds up in a technological miasma... in which hardship cases take precedence.

A. S. WILLKINSON
New York, N.Y.

INVISIBLE CASH
Forum:

Being a veteran of this last war and slowly wearing my nails down to the nub trying to get a house built, I was a little startled to read on page 5 in your August issue this remark, "With all veterans supplied by a grateful government with plenty of cash for down payments..."

Please, FORUM, if I'm missing out on something, let me know. So far it has cost me $32 to have a government appraiser look at my plans and property to see if my $10,000 house will be worth guaranteeing $4,000 worth of the mortgage, which a very reluctant bank is willing to give me providing I don't draw on the mortgage until the house is three-quarters finished. The cash to get the house to this point comes from my pocket, if I've got it. To date, the grateful government has given yours truly the whole sum of $300 mustering-out pay, which didn't begin to pay for some clothes to cover my nakedness, and which $300 was paid over a three-month period to make it a little more difficult.

Don't keep us in the dark about government cash—if there's any cash being handed out for down payments. I'm first in line. Not that all veterans need help getting started again, but people might get the impression we have everything handed to us on a silver platter. The housing situation is like a dog chasing its tail—round and round it goes, and the more one reads, the less one knows.

A. S. WILKINSON
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New York, N.Y.

The Architectural FORUM October 1946

LETTERS

THIS "STORM CLOUD" FORMS INSIDE THE BUILDING

PREVENT "IN-WALL" CONDENSATION
with BIRD NEPONSET BLACK VAPOR BARRIER

Vapor condensation is the foe of insulation. It impairs insulating efficiency, hastens paint peeling, structure rot. A sure way to lick the "storm cloud" of vapor that forms indoors, but condenses within the exterior wall, is with Bird Neponset Black Vapor Barrier. Applied on the warm side of insulation, Neponset Black gives three-way protection—against moisture condensation, paint peeling, structure decay. Costs so little, lasts a lifetime... only about $20. to safeguard a $10,000 house.

Bird Neponset Black Vapor Barrier is recognized as standard the world over. Remember! No insulation is complete without a separate vapor barrier... be sure of the best. Specify Bird Neponset Black. Consult Sweet's Architectural Catalog, 9b-2. Write Bird & Son, inc., Dept. 1610, East Walpole, Mass., for sample.


BIRD & SON, inc.
EAST WALPOLE, MASS.
permanently leakproof
department store
pipe lines

*SILBRAZ* joints made with Walseal valves, fittings and flanges are ideally suited to red brass or copper service lines for hot water, gas, steam, boiler feeds and air conditioning. They are permanent, leakproof, and trouble-free . . . their use will avoid costly maintenance and repairs — that's why leading architects and builders rate them so highly in the construction or remodeling of department stores.

Threadless, patented Silbraz joints are silver brazed (not soft soldered) pipe joints that are vibration-proof, corrosion-resistant, that will not creep or pull apart — joints that literally make the piping system a "one-piece pipe line".

So, if you are looking for maintenance-free pipe lines — for either new construction or remodeling — include Silbraz joints made with Walseal valves, fittings and flanges in your specifications. For further information regarding Walseal products, write for Circular 84.
Need a boulder-proof roof?

- You’re looking at one in this picture of a large Mid-West hydroelectric plant. Located where rocks, boulders and dirt rain down on it from the adjoining cut, this giant plant is safely protected because it has a Ruberoid concrete-surfaced industrial roof.

Obviously, roofs like this will stand the roughest treatment. That’s why Ruberoid heavy-duty roofs are opening new architectural possibilities in the use of valuable roof areas for the storage of oil drums, heavy equipment—and even as roof parking areas!

Proved-in-performance specifications—worked out by Ruberoid engineers—are available now for these recent roof developments. Ruberoid Approved Roofing Contractors, located in principal cities and towns are ready to give you assistance in planning and executing them. No matter what type of roof you may have in mind—Asbestos Felt and Asphalt, Coal Tar Pitch and Tarred Felt, or Asphalt Felt and Asphalt—call a Ruberoid Approved roofer. His assistance, based on long experience and backed by a complete line of materials—all from the same source—assures you of the right roof for any job.

HANDY ROOF INCLINE FINDER
Free On Request!

This useful pendulum device instantly gives the roof incline in inches per foot. Helps determine proper type of roof. Made of transparent plastic, it can also be used as a protractor.

RUBEROID BUILT-UP ROOFING

The RUBEROID Co., Executive Offices: 500 Fifth Avenue, New York 18, N. Y.
ASPHALT AND ASBESTOS BUILDING MATERIALS • THERMAL INSULATIONS
THE PRINCIPLE ON WHICH

AQUELLA WORKS

1 Here is an Aquellized concrete masonry unit filled with water. Naturally, there is no leakage.

2 But what happens if the Aquella surface coating is scraped off? To answer that, we scraped away this portion, and there's still no leakage. This may be slightly puzzling until you study the photograph of the third step...

3 The enlargement of a small, sawed-away section of the above block, which shows the way Aquella penetrates to fill and close each microscopic pore of the surface. It is the filling of the pores—not essentially the surface coating—which stops the penetration of water.

YOU SEE IT NOW—the principle on which Aquella works to make concrete masonry structures watertight!

The properly balanced ingredients of which Aquella is composed are so finely ground that when mixed with water, and scrubbed into the masonry, they penetrate and fill even the minutest pores of the surface.

Then—contrary to the shrinkage phenomena of most waterproofing materials—Aquella continues to expand as it cures to set up a hard, firm bond which stops water leakage, dampness or seepage.

Consequently, even the presence of a hydrostatic head of water on the unprotected side has no effect whatsoever on the integrity of the Aquellized surface. Nor does it in any way affect Aquella's inherent property to resist capillary action or water seepage. Aquella is cheerfully bright in its natural white finish...does not powder, peel or flake, and can be painted over with any color.

SPECIFY AQUELLA FOR CONCRETE, BRICK, LIGHT WEIGHT MASONRY UNITS, STUCCO OR CEMENT PLASTER.

Free from the organic binders, hygroscopic salts and stearates used in the making of ordinary water barriers, Aquella is an entirely new mineral surface coating which you can specify for watertightness inside or outside...above or below ground on all porous masonry surfaces.

PRIMA PRODUCTS, INC.
DEPT. D, 10 EAST 40TH STREET
NEW YORK 16, N.Y.
books about steel, wood or beton houses, or some manual for engineer or civil builder?

The why of my petition is that in this city of Civitavecchia many and many citizens are yet without house, so that we here have a great work and we must work with hurry if we want the reconstruction of our city.

You Americans send each day in Italy coal, corn, milk, sugar, etc.; well, let you send also for me a few books of engineering and of your building manner and an old compass box and I also will be able to do something for my country.

Excuse my rough English: I am now a little out of exercise, but till the beginning of the war I studied your standardization especially for shipbuilding, and in those days I spoke and wrote American and English language more fluently and more mistakeless than now.

Well, I am sure you will help me in clearing this hurdle, so that, very glad of your knowledge, I wait for a letter of yours. (If you cannot send the books, let you write the same, I will prefer.) And waiting, I shake your hand giving my thank.

AGOSTINO SPAMPINATO, Engineer Civitavecchia (Roma), Italy

OVERALLS VS. ICE CREAM PANTS

Forum:

You are, of course, aware of the confiscation of human rights carried out by the A.I.A. when the perfectly good, common word "architect" was torn out of the dictionary and legally confined to members of a small club. However, this sad state of affairs has been no real hindrance to me, only an annoyance. For, in my fifteen years of house designing, I have built up quite a satisfactory business and reputation.

When I graduated from Antioch College of Art in 1928, no self-respecting architectural office would take on a house design job for a home to cost less than $20,000. In fact, house design has always been the architect's stepping-stone to grander things, of which Foirm will send to Engineer Spam.

Readers may contribute to the bundle of material which Forum will send to Engineer Spam, etc.

For... in Anchor-Weld Iron Fence... grooved, square pickets and rails of the same size are worked into architecturally correct designs... then electrically welded under pressure in an exclusive Anchor process. Pickets cannot loosen. Sections cannot sag. For, in my fifteen years of house designing, I have built up quite a satisfactory business and reputation.

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No matter what kind of a degree you have, you cannot design low cost homes and live in ice cream pots. So I am pretty sure have never designed a house to cost over $20,000.

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Watch the latest products and see the wider and wider use of advanced light alloys by Bohn

BOHN ALUMINUM AND BRASS CORPORATION
GENERAL OFFICE—LAFAYETTE BUILDING—DETROIT 16, MICHIGAN
Designers and Fabricators
ALUMINUM • MAGNESIUM • BRASS • AIRCRAFT-TYPE BEARINGS
This attractive cottage—with "Century" Asbestos roof and sidewalls—has three qualities that countless GI's and other home buyers want...good looks, sound value, and durability.

"Century" Shingles and Siding are economical in cost, suitable for any type building, and they last indefinitely. They are proof against weather, fire, rot, rodents, termites, and never need to be painted because they are made of asbestos and cement.

"Century" Siding comes in color-fast shell white and graytone... in ready-to-use 24" lengths... with grained, weathered surface and in wavy butt-line style.

"Century" Roofing Shingles are supplied in various styles to suit any taste, fit any architectural plan, harmonize with any environment.

Specify "Century" Roofing Shingles and Siding in the homes you are planning to build. Write for further information about these and other K&M products.

Original manufacturers of asbestos-cement roofing shingles in this country

KEASBEY & MATTISON
COMPANY • AMBLER • PENNSYLVANIA
Easy to Design with . . . Easy to Build with

ARCHITECTS find Stran-Steel practical and economical to use. It provides durable, rigid, fire-safe framing of lightweight steel, yet permits wide flexibility in working out designs.

BUILDERS like to work with Stran-Steel. Pre-cut to required lengths, the framing members are assembled with self-threading screws. Other building materials are simply nailed to the frame by means of the nailing groove, a patented feature of all Stran-Steel studs and joists, which grips nails as in a vise, holds them permanently and securely. The frame goes up quickly, without the use of special tools or equipment.

PROSPECTIVE BUYERS are quick to appreciate the advantages of Stran-Steel. It gives homes, apartments, stores and industrial buildings a greater investment value, since sag-, rot- and termite-proof framing means lower maintenance costs.

For full details, see Sweet's File, Architectural, Sweet's File for Builders, or the January issue of Building Supply News.

GREAT LAKES STEEL CORPORATION
Stran-Steel Division · Penobscot Building · Detroit 26, Michigan
UNIT OF NATIONAL STEEL CORPORATION
WHEN YOUR CLIENT SAYS,

"Do Something about
Cockroaches!"

Or half a dozen other things like...
"No mold growths" or "No sparks!"

You can solve the problem with a floor surfacing material—Hubbellite.

Laboratory tests and actual installations in kitchens, hospitals and food processing plants prove that roaches would rather starve than live on Hubbellite.

Hubbellite is a monolithic surfacing applied only 3/16" thick over structurally sound wood or concrete. It is resilient but so resistant to foot traffic or the small wheeled vehicles common in most plants, that it compares more than favorably with hardwood or cement. It is non-denting under ordinary point loads, non-dusting, static-safe and non-sparking.

One of its most unique features is that it retards many molds and bacteria growths. This inhibiting effect has given it great success in locker rooms, shower rooms and around swimming pools. Hubbellite also withstands foods and fats which usually wreck resilient type floor coverings in kitchens. It also withstands the neutral oils and greases in machine shops.

This seems to be claiming a lot for one floor. We have records of laboratory tests and of installations. The best thing is to write, stating your particular interest, or ask for complete literature for your file. You never know when you will have a client who demands any of Hubbellite's features—or all of them.

HUBBELLITE

IS SOMETHING TO KNOW ABOUT

H. H. ROBERTSON CO.

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LETTES

The Architectural FORUM October 1946

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HUBBELLITE

IS SOMETHING TO KNOW ABOUT

H. H. ROBERTSON CO.

2403 Farmers Bank Building
Pittsburgh 22, Pennsylvania

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LOANS AND GROANS

Forum:

When I saw the story on page 7 of the July issue about the Bank of America and their policy of lending larger sums on houses than other loan agencies in southern California, I was curious to see whether this was just more publicity from their well-organized promotion department.

On the same day this week, I applied for a loan on my house in Beverly Hills from the Bank of America, and from one of the insurance companies. The Bank of America's offer was for a loan of $6,500 at 5 per cent for a 10-year period. The insurance company offered $7,500 at 4 per cent for a 15-year period.

My impression from this is that, while the Bank of America is lending larger amounts each month than the other banks, their rate of interest is too high and the total is too close to the insurance company's offers to justify the kind of publicity you gave them in your July issue. They are after the suckers who haven't heard that insurance companies are in this market too—with a lot of money at a lower rate of interest and for longer periods. It is obvious that Bank of America money at 5 per cent for 10-year periods is fairly safe under these terms—but it is nothing like the 60 per cent of market value figure that you quote.

At the same time I asked a real estate broker to get me an offer on the same house. It will sell, as of today, for $22,500 on a half-cash deal. Thus, the Bank of America will lend 40 per cent of its market value, not 60 per cent. And the insurance company will lend 33 1/3 per cent, approximately.

I have no direct interest in refuting this publicity about the Bank of America. But if they had offered to lend me $12,500 on this house which, less than three years ago, cost $9,000, I would have sold my Bank of America stock at once if I had still been holding it.

(Continued on page 56)
Put on the plaster! Here's a ceiling that will stay put.

Rust is definitely licked. Corrosion is permanently stymied. *For this ceiling is suspended on hangers and tie-wires of Monel.*

Rustproof through and through, these wires have no coating that flakes off when workmen bend and twist them. And they'll resist corrosion by alkalies, salts and acids encountered in plaster, lime and other materials.

Their tensile strength (approximately 66,500 pounds per square inch) eliminates the need for such wasteful operations as four-inch spacing and double looping of tie-wires. You can safely secure wire mesh and expanded metal lath with single Monel ties spaced at six-inch intervals.

In addition to being rustproof, corrosion-resistant and strong, Monel hangers and tie-wires are pliable. They thread easily and twist to a snug fit without breaking.

All these qualities add up to increased safety, rapid and economical installation and lengthened wall and ceiling life.

Widely used in schools, institutions, hospitals and public buildings of all types, Monel wires are equally suited for general office building construction and remodeling. They’re unequalled for securing metal or fabric lath to furring bars, channels or studs. They provide permanent fastening for roof and ridge tiles, and for concrete and brick masonry anchors.

Our illustrated specification folder, *MONEL TIE-WIRE*, contains further information which we’re sure you’ll find valuable. Use the handy coupon at right, and we’ll get your free copy out promptly.

**THE INTERNATIONAL NICKEL COMPANY, INC.**

**MONEL**
For more than a decade, Briggs Beautyware has enjoyed an enviable reputation for customer satisfaction.

Tried-and-tested in hundreds of thousands of American homes, its colorful modern beauty . . . superior quality . . . and extra safety features have won enthusiastic acclaim.

Today, despite increased manufacturing facilities and greater-than-ever production, the demand for this distinguished nationally advertised line continues to exceed supply. You may be sure, however, that every effort is being made to provide prompt service and immediate delivery.
Yes, sir. The Weather Man is boss. When it comes to placing a Flintkote Asphalt Shingle on the market... he's the one we have to satisfy.

In the Flintkote Laboratory, there's a Weatherometer... a machine that makes time really fly. It produces weather effects in one-tenth the time of outdoor exposure.

Day after day, hundreds of shingle samples undergo rigorous exposure tests in this machine.

And, year after year, thousands of shingle samples are standing tests by the weather itself on the Flintkote Roof Decks in New Jersey, Louisiana, Illinois and California. Some for as long as 20 years.

At Flintkote, it's not enough for skilled scientists and engineers to say a shingle is good... that it will retain its colorful beauty... that it won't crack in cold climates or soften in blazing sun.

Until the Weather Man puts his stamp of approval on a Flintkote Shingle... approval that enhances your reputation by ensuring long years of service to the home owner... it does not leave our plants.


FLINTKOTE

the extra years of service cost no more!

FLINTKOTE QUALITY BUILDING MATERIALS FOR MANY PURPOSES

Flinfkote Asbestos-Cement Shingles and Siding are ideal for new construction... or for the economical modernization of existing homes.

A new $1,000,000 research laboratory, part of a $16,000,000 plant expansion program, will soon bring you even better Flintkote products.

Flintkote Cold Process Built-up Roofs go on fast, and economically, without fire hazard, when they're applied by brush or spray equipment.

Flintkote Insulating Wool is easy to apply, light in weight, fire resistant, and won't mat or settle. Provides year-round home comfort.
Better concrete because of better dispersion with TRIMIX

THE MULTI-PURPOSE INTEGRAL LIQUID ADMIXTURE

The magnified photographs show why TRIMIX improves workability of cement and mortar mixes with lower water-cement ratio—20% less than the usual volume of gauging water required for normal slump.

A patented surface-active agent enables TRIMIX to wet and scatter the particles without interfering with the hydration reaction of the cement.

TRIMIX accelerates set ... also has air-entraining properties, helping concrete to resist effects of freezing and thawing.

See SWEET'S for further information, and for descriptive literature write Dept. A-10.

I thought this would be of interest to you, possibly to insure more careful reading of future publicity hand-outs from the Bank of America and to question their truth, as I did this one.

Beverly Hills, Calif. N. Z. Oppenheim

Financier Giannini wisely goes by appraised rather than market values in lending his 60 per cent, still tops other west coast bankers.—En.

RUGGED INDIVIDUALIST

Forum:

Several statements in the July issue interest me very much, beginning with HM's statement that approval of "public" housing is a criterion of "good citizenship" (page 66). Do you really mean to say that a man who disapproves of or repudiates the actions of men in PWA, RA, USHA, NHA and FPFA is not a good citizen?

On page 98, where did you get your figures on the cost of street and lot improvements? I would like to pay anyone who can install improvements at such rates a bonus of 150 per cent of costs to do some work for me.

Do you approve the statement in the Wilde letter (page 56) that we lack materials because industry is on a "sit-down strike?" As a member of the builders' Wyatt committee, I have heard both Wyatt and Small attribute the shortcomings to the union-called strikes and to OPA. If you do not approve the statement, do you think you should print "opinions" which are obviously lies?

Do you approve the demand in the Wilde letter for a central agency to direct planning, production and construction? . . . We have a great American heritage—physically, economically and politically. We need reforms and changes. Primarily, we need to learn that great fortunes are essentially great capital and that we do not need to take as much capital out of production in the future as we have in the past. Why must the Forum support totalitarian bureaucracy when the fundamental precepts of a free enterprise economy are so much more challenging, the results so obviously better for mankind?

Milwaukee, Wis. Frank Kirkpatrick

1) Disapproving of "the actions of men in PWA, RA, USHA, NHA, and FPFA" should not be confused with a blanket indictment of public housing. Forum has long backed government aided housing for those whom private enterprise are currently further away from serving than ever.

2) Cost figures on street improvements were based on data from the Urban Land Institute and FHA; unit and front foot costs were derived by averaging January, 1946 costs throughout the country.

3) Publication of any letter in the Forum signifies reader interest not Forum approval.—En.

(Publisher's Letter, page 62)
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Take a good look at the benefits of this new thermoplastic-insulated cable. Check its features against your clients' requirements. You'll find many reasons for specifying it for new wiring, or re-wiring work.

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Ask your G-E Merchandise Distributor for more complete information, or write to Section W16-1026, Appliance and Merchandise Department, General Electric Company, Bridgeport, Conn.
Outside Walls
Insulite sheathing builds a strong, weathertight, wind-proofed wall...a wall with effective insulation.

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This formability is a big plus, when you add it to the other advantages of Alzak Aluminum Reflectors: corrosion and heat resistance, surface stability; in short, sustained high efficiency, for either specular or diffuse applications.

Consult your reflector manufacturer regarding specifications for Alzak Aluminum, or other finishes of Alcoa Reflector Sheet. ALUMINUM COMPANY OF AMERICA, 1944 Gulf Bldg., Pittsburgh 19, Pennsylvania. Sales offices in principal cities.

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Masontown, Pa., site of 110 homes being built under the direction of the George C. Brown Co. of Pittsburgh. Architect, William C. Young. Contractor, Mellon-Stuart. This is the first in a series of the George C. Brown Company developments.

New owners are enthusiastic about better living, electrically. Mrs. E. C. D., of 18 Cumberland Ave., Masontown, Pa., is especially proud of her G-E Dish and Disposall. But, like other Masontown homemakers, she has found that all her appliances—Range, Refrigerator, Steel Cabinets, Washer, and Water Heater—help make housework easier, living pleasanter, in her new all-electric home.
"We're Selling G-E Equipped Homes
For As Little As $51 to $53 a month," Says the
George C. Brown Company of Pittsburgh.

That's what George C. Brown, president, has to say about his
pany's postwar homes at Masontown, Pa.

These homes are the first fulfillment in this region of the
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Standard equipment in every home includes the all-
electric kitchen with G-E Range, Refrigerator, Steel Cabini-
ets, Dishwasher, and Disposall, as well as a G-E Washer
and Water Heater.

But most important is the fact that these homes with G-E
equipment cost the owner only about $25.00 a month
more than the same homes would cost without any equip-
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So don't tell us it's impossible to include the best electric
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...we're doing it!

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that a home with no extras to buy is always a fast seller.

From a quality angle: they know that selling complete, all-
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Most women want G. E.

In planning your new homes, keep this in mind too: recent
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A LETTER FROM THE PUBLISHER

Dear Reader:

Even if the players who had the bad luck to lose in the semi finals of the National Amateur Tennis Championships last week had won, it would still have been a field day for California. With the single exception of Miss Hart, who lost to Pauline Betz, they all came from the West Coast. The matter of producing champions is by no means limited to tennis. Take building. Try to find smarter home builders than Fritz Burns of Los Angeles and Dave Bohannon of San Francisco. Architects? If we made up a list of the hundred best men in the U. S., fifty of them would be from the West Coast and forty of the fifty from California. A few months ago Los Angeles produced the most progressive zoning ordinance to be found in North America, and that, undoubtedly, could be widened to this hemisphere. These facts are generally recognized, but too often dismissed by airy references to the climate. Granted the Southern California climate is moderate. But anyone who has ever watched the fog roll in and felt the wind whip around in San Francisco knows that it gets pretty rugged. So let us not confuse climate with competence.

This comment is in pleasant reply to those who criticize the Forum for publishing so much California work. We pick it on merit—and look at the postmark later.

But Californians would probably confess, however reluctantly, that the top schools teaching architecture today are still in the East, and mostly in New England. This statement must be tempered by reporting that Columbia will build a scientific laboratory at Irvington-on-Hudson where postwar research will be undertaken. This fine collegiate enterprise, however, will be sheltered in a new structure "planned as far as practicable in keeping with the lines of the early nineteenth century home of Col. James Alexander Hamilton," located on the estate. Smith College, on the other hand, is an institution which feels only a compulsion to look forward in its building program. Already we can picture a future Smith girl rebuffing the advances of a Columbia student researcher?

Forum Editors continue to find time to dash off an occasional tome between issues. Scheduled to appear next year is a considerable work (still awaiting a title) by Technical Editor James Marston Fitch, Jr. Jimmy, who loses no opportunity to discuss this volume in a high, nasal, Southern twang, reports modestly that it will make any further books about American building—past, present and future—unnecessary. We would be somewhat less terrified by this prophecy if it came from a less erudite and versatile character. After some considerable observation of Mr. Fitch, whose background includes not one but two universities, not one but two planning commissions, not one but two professional journals, we are disposed to take him at his word and calmly await delivery of our current building mess sometime next spring. It looks as though we would have to do that, Fitch or no Fitch.

As the vacation season draws to a close, we were shocked to discover that some Forum absences had not been on vacations. For example, it now turns out that Associate Editor Louise Cooper Whiting was away from the office producing an eight-pound potential journalist (male). Empty drafting boards yawn in the art department...vacated by artist-draftswomen such as talented Madelaine Thatcher, who, it appears, has ducked off to New Mexico for a spell of painting. One battered desk, which we made an excuse to visit every day, is momentarily vacant through the department exodus, an inevitable aftermath of war. But Californians, art department exodus, an inevitable aftermath of war, was first started by Ruth Feierabend. Looking at the thing very selfishly, General Hershey might have served us better had he been less hasty in demobilizing certain dashing young husbands.

H.M.
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Andersen Windowalls perform both the functions of a window, in that they open up a view and provide ventilation, and of a wall, in that they act as a barrier against inclement weather.

This bedroom installation, in a home designed by Joseph Douglas Weiss, architect, consists of a pair of Andersen Horizontal Gliding Windows, Unit Number 48040. For details, see Sweet's Catalog.
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Edgar Lynch, Architect, directs activities of the new Brunswick Architectural Research Department. In practice since 1929, he interrupted a noteworthy career as architect and consultant to outstanding Chicago and New York business and realty firms, to collaborate with Donald Deskey Associates on the original concept of this Brunswick service.
to architects

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PIETRO BELLUSCHI'S conception of a Shoe Store

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WALTER JACOBS, architect, is now located at 1170 Broadway, New York, N. Y.
Bosin & Lamerson, architects, have moved their offices to 827 Forsyth Bldg., Atlanta, Ga.
MAX MERCER, AIA, has transferred his office to the Little Theater Bldg., Yellow Springs, Ohio.

DIED
CHARLES LANDERS, civil engineer, an expert on foundation constructions, at his home in New York City. Mr. Landers acted as consultant on the Equitable Building and American Telephone and Telegraph Building as well as other important New York structures, most recent of which was the Stuyvesant Town housing project.
STANLEY ROUSH, Pittsburgh architect and designer of bridges. As architect for the city of Pittsburgh and the County of Allegheny, Mr. Roush designed many county and state institutions and industrial buildings.
CHARLES BEERSMAN, Connecticut architect, an associate of Fellheimer & Wagner of New York. Mr. Beersman designed such well-known structures as the Missouri State Capitol, the Cleveland and Chicago Union Stations, Wrigley Building in Chicago and the Strauss Building in Cleveland.

CORRECTIONS
Design of the precast concrete warehouse at Mechanicsburg, Pa. described in the July Products & Practice section, p. 197, should have been credited to Mr. A. Amirikian, Head Engineer, Bureau of Yards and Docks, Navy Department.
The interior design of the Washington House lobby, shown on page 87 of the August FORUM, should have been credited to Eugene Schoen & Sons of New York City.
DUST-STOP Air Filters
used in Dual heating system

In the new Benjamin Electric Manufacturing Company Laboratory at Des Plaines, Illinois, the heating system employs both radiant floor coils and warm air from the air-conditioning system during the heating cycle. The dual system, according to its designer, combines the best features of both types of heating, while keeping the cost of the radiant portion to a minimum.

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Norfolk and Western RAILWAY

Unique design of this home places bedrooms on the lower floor with combination living and dining room directly above—all away from the street for quietness, privacy, and maximum view. This is an ideal design for homes along rivers and lakes, or for those in any city.
Sending your voice over an invisible infra-red ray of light is now possible, but still in an experimental stage and thus of little practical value.

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HOW do the buildings of the first year of peace differ from those of 1939 or 1940?

To answer this question, the editors of the Forum surveyed the U. S. They garnered a surprising number of finished jobs in a wide variety of fields. While none of these buildings represents any climactic break with the pre-war years, their general design level is indubitably higher. Equally happy is their geographic distribution—instead of the usual concentration along the east and west coasts, the whole country showed itself to be hard and intelligently at work. Contrary to popular impression, a large volume of building has been completed, and there is evidence of new talent cropping up in widely divergent places.

Even a cursory glance at this issue will show that, at one level at least, generalization is possible: the trend towards contemporary design continues. In commercial and industrial work it has become, of course, the dominant idiom: but in the past five years it has obviously spread to all other types as well. Even the Cape Cod cottage is yielding before its advance. Evidence of this comes from those pulse-counters of public taste, the operative builders. Thus Cy Williams' project (p. 112) offers single-floor, basementless houses with solar windows and radiant heating, while George Nemeny's higher-priced Long Island development (p. 116) stems unabashedly from the more advanced architectural design of prewar years.

The designs in this issue show other trends. For example—that the line between architecture and engineering has in some areas almost completely disappeared. Thus both lightmeter and taste were necessary to the luminous ceilings of the Florsheim shop (p. 138) and the Grayson store (p. 133). And both good acoustics and good looks resulted from architect-engineer collaboration in Columbia's new experimental studios (p. 92). This tendency towards synthesis is expressed in another fashion in A. C. Robinson's work for the Chesapeake and Ohio (p. 96): here one architectural office is designing railroad stations, locomotives and coal loaders.

If large-scale projects are notably missing from the present collection, they are not missing from most offices, where drafting boards creak under impressive working drawings. The press of most cities daily carries mammoth projects for shopping centers, municipal parking garages and housing developments which—in scale and complexity—are qualitatively different from those of the prewar period. Nor are these merely exciting speculations: real men, real money and real land stand behind them, waiting for the lights to change. If there is a postwar trend, this is it. Here is forecast the major effect of reconversion.

The buildings on the following pages show that the design curve of the Thirties has been projected across the chasm of the war. Building has picked up where it left off and goes forward from there—this, in itself, gives validity to prewar trends.
In the fields of communication and transportation wartime technological advances have built up an almost irresistible pressure for change. Although railroads, airlines and radio could get by with existing facilities, they are in a mood to scrap the old and start afresh. An added incentive is intense postwar competition between rail, air and motor travel which will force each to improve its service. New construction already reflects these changes.
EXPERIMENTAL STUDIO uses motorized walls to vary acoustics.

FELLHEIMER & WAGNER, Architects
CLARENCE R. JACOBS, Acoustical Engineer

The need for acoustical flexibility in broadcast studios has been long apparent. Big networks require a variety of acoustical conditions to permit production of each program in the most desirable environment; yet simple bookkeeping dictates the maximum use of each studio. To unlock this paradox the Columbia Broadcasting System recently installed a pilot studio in the century-old Liederkranz club-house in New York City. Key to the solution is a system of movable vanes which, at the touch of a button, convert the response of the studio from "dead" to "brilliant." These vanes —designed and patented by CBS engineer Clarence R. Jacobs (FORUM, Sept., '40)—constitute the inner membrane of the studio walls: on two sides they are vertical, on the other two, horizontal. (Although the ceiling has a similar profile it has no movable elements.) Built of plywood on wooden frames, the fins are hollow and roughly airfoil in section. Behind them, but inside the structural walls, are absorptive materials in various thicknesses. Manipulation of the vanes by the control board yields a wide range of acoustic conditions, both in wall profile and surface characteristics. Thus the studio can be adapted quickly to either a single piano or an orchestra of eighty pieces. There are no provisions for an audience.

The illumination, which was engineered by the Holophane Company, was designed for 98 per cent visibility at the most critical seeing task—that of reading script. This required 25 foot-candles. For psychological effect, the light itself is tinted pink by means of special lenses which absorb the yellow.
AIR TERMINAL for small west coast field follows best prewar pattern, allows for expansion.

KENNETH S. WING, Architect
W. HORACE AUSTIN (deceased). As-...K.-ST ANTON-REED. General Cntrartor

ENTRANCE FACADE IS PROTECTED BY LONG MARQUISE; REAR, WITH GLAZED SPECTATORS' DECK, HAS TRADITIONAL APPEARANCE OF SHIP'S...

With experts predicting that airline travel will soon break prewar railroad records, expansion of airport facilities promises to become aviation's No. 1 problem. Chances are that the new crop of air terminals will be basically the same as their predecessors, for designers of these buildings have arrived with prophetic regularity at a single solution to their varied requirements—a symmetrical building dominated by a central operations element and topped with the proverbial control tower.

Latest evidence that this design pattern is still in vogue is the reinforced concrete administration building at California's Long Beach Municipal Airport, which recently emerged from its wartime camouflage. Called Dougherty Field, this airport currently serves two scheduled airlines and numerous unscheduled flights, but steadily increasing traffic is anticipated. Thus, the architects' major requirement was a building which would adequately handle today's relatively light business and lend itself to almost limitless expansion. The latter was accomplished by designing the building as a small curved segment of a large wagon wheel, the hub of which is the perpendicular intersection of the 500 ft. access road and Lakewood Boulevard, a main route to the city. Containing 455,000 cu. ft. and measuring 175 ft. in length, this building can be expanded in stages until the additions on either end form a semi-circle abutting the boulevard. Although passengers could be checked through these increments directly to the field, it is likely that any extensive expansion would require enlargement of the second floor dining and office facilities, the third floor weather, communication and traffic departments and the elevated control tower.
TRUCK TERMINAL in New Jersey provides a haven for drivers as well as a transfer point for long distance freight.

KELLY & GRUZEN, Architects—Engineers

Since a truck freight terminal accommodates an operation which the public seldom sees, the design emphasis is logically placed on efficiency of plan and relatively little attention is paid to architectural appearance, inside or out. The new terminal of the Baltimore Transfer Co. in Jersey City, N. J. is a case in point. Located well off the public's beaten path on the edge of an erstwhile slum recently rehabilitated with a public housing project, the terminal's exterior is comprised of merely the walls, roofs and windows required to enclose the efficiently organized parts of a freight transfer point.

Layout of the building makes good sense when the unsung business of freight transfer is understood. The daily routine begins at about 6 a.m. when the large tractor-trailer trucks arrive at the terminal at the end of their cross-country runs. They are driven into the large shed where they are turned over to "jockeys" who park the trucks and handle them throughout the unloading and reloading process. The long-distance truck shed is about 100 ft. deep and will accommodate 20 of the large company-owned vehicles at once. It is completely covered to facilitate operations in all kinds of weather and to permit use of the shed as a garage for truck repairs.

On the opposite side of the loading platform, 20 smaller local trucks may be backed up to the dock to deliver freight for long distance movement and to make pick-ups for nearby stores and other outlets.

When a "jockey" relieves a long-distance driver, the latter reports to the general office where he prepares and turns in certificates on the contents and weight of the load he has just delivered. His subsequent stops include the washroom, locker room and, depending upon his needs, the lounge or dormitory.

In addition to caring for the company's routine business, the building includes a two-stall garage for the servicing and repair of trucks and a storage room for the safekeeping of freight not picked up on schedule.
RAILROAD STATION for a small town is first step in C & O's big modern design program.

GARFIELD, HARRIS, ROBINSON & SCHAFFER, Architects
JOHN P. PETTYJOHN & CO., General Contractor

While the Chesapeake & Ohio Railway earns most of its money hauling freight, particularly coal, it is also interested in passenger traffic. It has gained the good will of railroad passengers in general by its lively advertising campaigns sponsoring coast-to-coast through service and industry-wide improvement in passenger car facilities. The C. & O. is also practicing what it preaches by making its own railroad more presentable. It has just completed a new station for the small coal-mining town of Prince, W. Va. (pop. 150), and is ready to begin a bigger one to be presented in a later Forum. Collaborating with specialists, the architects of these stations have also styled three large turbo-electric locomotives for lightweight passenger trains (see rendering, above), worked out the streamlining of existing steam locomotives and designed special coal loaders to service the new locomotives.

Design of the Prince station belies its small size. Measuring only 19 x 55 ft., the dimensions of the central waiting-office room are exaggerated by the full side-wall windows which extend from the floor to the 18 ft. ceiling. These windows are protected by overhanging eaves (and to the south by the platform canopy) designed to admit winter sunlight but to shield the room from the direct rays of the summer sun. In addition to their lighting function, the large windows open the room to the building's scenic surroundings which become the waiting room's major decorative feature. A photomural at one end of the room depicting a typical C. & O. freight scene adds to the outdoor illusion.

The building is radiant heated throughout. Although hot water coils were placed in both the floor and ceiling of the public rooms, they were omitted from the concrete floor of the freight, baggage and express room so that items stored there would not be affected by unusual temperatures.

Parking space for a total of 38 automobiles is provided along the platform canopy.
Platform canopy and roof of baggage wing combine to produce a long, low profile which contrasts with rugged surroundings. Detailing of ticket office windows and service facilities is related to the building like the design of platform canopy.
The prewar trend toward better design in industrial buildings continues to move forward. The appearance of the factory is today almost as important as that of the product itself. Many of the huge new plants which illustrate this point most dramatically (such as the Ford and General Motors research centers) are yet to be built. But finished projects of smaller scale show that American industry has decided that architecturally it pays to put its best foot forward.
NEW PLANT for H. J. Heinz processes baby food in one continuous operation.

SKIDMORE, OWINGS & MERRILL, Architects
W. A. BECHTEL CO., General Contractors

Raw fruits and vegetables enter at one end of this huge new plant at Tracy, Calif. and emerge, completely processed, at the other—ready for the grocers' shelves. Designed for straight-line production, the plant employs from 300 to 1,000 people, depending upon the season. The huge two-story kitchens are floored and walled in glazed tile (fruit acids would quickly destroy plain concrete). Eventually they will be completely air conditioned.
ADMINISTRATION BUILDING for radio maker includes display room.

THEODORE CRILEY, JR., Architect
WM. P. NEIL CO., LTD., General Contractor

Adjoining its major Los Angeles plant, Hoffman Radio Corp.'s new administration building harmonizes with the exterior design of the existing factory, yet stands out as the executive hub of the project. Reinforced common brick masonry painted white duplicates the appearance of the factory walls, while face brick laid with accentuated horizontal mortar beds provides an attractive frame for the entrance and the huge adjoining window. Setbacks make room for planting which will further enhance the building's appearance.

Interior of the building is finished with asphalt tile on the concrete floors, plaster on the walls and acoustical tile on the suspended ceilings. Walls of the president's office are covered with panels of combed fir plywood in a checkerboard pattern. Containing examples of the company's products, the display room is located where it may be seen from both the lobby and street.
RAILROAD LABORATORY employs interior colors as safety devices.

DE LEUW & CATHER, Architects
BULLEY & ANDREWS, General Contractors

Part of an extensive rebuilding program, the Rock Island Railroad's new Chicago laboratory is designed for the testing of some 70,000 items used in the company's operations. In addition to general offices, a library and the usual service facilities, the building contains fully equipped individual laboratories for testing various classes of materials ranging from paints to locomotive parts. Natural lighting of the entire 16,275 sq. ft. floor is accomplished by continuous lines of glass block panels, horizontally hinged windows and clear glass interior partitions. To further insure adequate lighting, the interior of the reinforced concrete structure is finished with unglazed vitrified tile whose buff color was selected for its light reflecting properties. (The exterior is veneered with red shale brick.)

Colors used in the machine shop and physical testing laboratory are intended to promote safety as well as comfort. Ceilings are a pastel green trimmed with a deeper green, claimed to be restful to the eyes. All stationary equipment is painted focal green; moving parts are buff; operating levers, focal yellow; starting switches, focal orange.

FACTORY for small electric motors enjoys controlled conditions.

THE AUSTIN COMPANY, Engineers and Builders

The new General Electric Co. plant at Tiffin, Ohio processes raw materials into fractional horsepower motors. To obtain the maximum benefits of straight-line mass production techniques and to control quality through dust elimination, the room housing the stator winding facilities enjoys completely controlled conditions. Remainder of the manufacturing space receives the benefit of partially controlled conditions, with 22 changes of air per hour.

Column spacing throughout the general manufacturing areas is 40 x 60 ft. These dimensions are spanned with Austin-developed trusses comprised of welded H-beams which permit the use of overhead conveyors along their lower chords and thus allow a much more extensive and flexible system of overhead conveyor lines than is possible with conventional panel joint trusses.
WAREHOUSE OFFICES are cooled by water on the roof.

EMMERLING, SPELICY & HARTMAN, Architects
DARIN & ARMSTRONG, INC., General Contractors

The neat appearance of Production Steel Co.'s new Detroit warehouse belies the fact that much of it was built of materials salvaged from the burned-out original plant. Existing column footings were reused, and reclaimed brick, steel sash and framing members helped circumvent material shortages. Comprised entirely of new materials, the office wing has a dead level roof covered with a 2 in. film of water during the summer. Cooling water from the air conditioning compressor is discharged on the roof with the two-fold effect of reducing the cooling load and lowering the roof surface temperatures on hot days from 140° to 90°. Other features of the office building: prefabricated steel partitions and wall liners and acoustical metal ceiling pans, all of whose dimensions fit handily the 4 ft. module on which the design is based.
STARCH PLANT uses curved corners for cleanliness.

Converting sweet potatoes into starch at the Clewiston, Fla. plant of the U. S. Sugar Corp. is a dangerous process, for starch dust is highly explosive. This fact is reflected many times in the design of the project. Buildings housing the various operations are separated by at least 50 ft. in accordance with the fire underwriters’ specifications. Lower floors of the smaller units are not enclosed, eliminating the need for explosion vents. Dust-catching corners in all enclosed units have been replaced with curves which are repeated in the open buildings to unify the design of the project. Forced filtered ventilation, adaptable to future cooling, was required to maintain cleanliness in the largest building. This also suggested the use of windowless glass block walls. (The alternative screened opening was vetoed because a 30 mesh screening would be required to keep out Everglade insects and would admit little air.)
Exteriors are brushcoated blue-grey, signs and column at entry are coral and all trim is painted aluminum.

Glazed screens protect employees' sun deck from sharp bay winds. Windows are sealed against dust, open only for cleaning.
Lack of eating places in area led to this sun deck and...

This handsome lunch and recreation room for employees.

Office building provides for efficient work, pleasant lunches.

Wurster, Bernardi & Emmons, Architects

Plant and general offices of the Charles L. Harney Co. have recently been consolidated in this striking new building erected at the company's plant in San Francisco. This firm of general contractors, prior to the completion of the new building, maintained its general office in a downtown office building. This necessitated time-consuming travel for the staff between offices and plant: hence, the decision to consolidate all office and clerical operations at the plant. However, because there were no restaurant facilities in the neighborhood suitable for the women staff members, it was decided to provide for lunches in the new building. This led to its most distinctive feature—the spacious recreational area on the top floor. The suite consists of a pleasant dining room, a self-contained kitchen and a partially roofed sun deck enclosed with a glass windscreen.

The building lies along one of the property lines, its narrow plan being determined by the existing layout of the plant. Plant offices occupy the ground floor, with general offices on the second. Since the rock crusher is a source of dust and noise, all windows are weatherstripped and opened only for cleaning. Ceilings are acoustically treated and all interiors are mechanically ventilated.
The best houses built since the war are not radically different from prewar designs. The exigencies of the present crisis, however, have forced them into a slightly different pattern. Most evident is the need (due to the tremendous price rise) to design simply and compactly, providing comfortable living in a minimum of space.
CASE STUDY HOUSE solves the living problems of a small family.

J. R. DAVIDSON, Architect
MYERS BROS., Contractor

Two years ago California Arts & Architecture started a program of "Case Study Houses" by leading architects to forecast the trend of creative thinking in contemporary home design. The J. R. Davidson house is the first of these plans to be taken off Arts & Architecture pages and translated into wood and glass. Built for $14,000, its compact plan boasts extraordinary ease of circulation, includes such amenities as a dressing room, kitchen-dining nook, utility area, service yard and two separate patios—one connecting with the living room and master bedroom, the other with the second bedroom whose separate entrance makes it practical as a private apartment. Noteworthy are the dry-wall construction, radiant heating and appropriate use of modern materials.
SEVERELY SIMPLE MASTER BEDROOM

EXTRA BEDROOM HAS STUDIO COUCHES, DESK

J. R. DAVIDSON, Architect
MYERS BROS., Contractor

COZY FIREPLACE CORNER IS FOCAL POINT FOR THE GROUPING OF LIVING ROOM FURNITURE

KITCHEN OVERLOOKS FRONT YARD

DINING GROUP IS NEAR KITCHEN
HOUSE IN TEXAS provides maximum living in two major rooms.

CAUDILL & ROWLETT, Architects

An open plan with only one interior door serves to cut costs and improve circulation in this small, low-priced home. It is oriented to receive the cool summer breezes, but regardless of wind direction there is always cross ventilation through the entire house. Although only 650 ft. of floor area are actually enclosed, the dwelling achieves a spacious atmosphere with its large glass areas, absence of partitions and good-sized porch opening off the living room. There are twenty windows in all, designed in identical sizes to save money. Three-foot overhangs above these windows keep out the sun and rain. The exterior—salmon pink brick, ivory siding and gray-green trim—contrasts pleasantly with the deep green of surrounding oak trees.
HOUSE IN SEATTLE, WASH., is designed for privacy from neighbors and separation of living-working quarters.

CHARLES A. LAWRENCE, Architect

A steeply sloping site overlooking Lake Washington was the determining factor in the design of this split-level, two-building home. The main quarters, with living-dining room and kitchen facing the lake, are in the lower house; the laundry, architect's studio and garage are in a three-story building nestled against the steep bank, planned so that the garage is high enough for access from the street. The two buildings are joined by a covered passageway leading from the kitchen to the laundry.

Taking full advantage of the view, the architect has created an open design with large glass areas on the lake front and a patio for outdoor living. Because neighboring houses are very close, the sidewalks are windowless except for a few clerestories. Floors are raised from grade to prevent dampness, and heating is supplied by ducts feeding into a cemented area beneath the lower house. These ducts are carried in the overhead walkway to the laundry, studio and garage.
DINING LIVING
FURNACE BED ROOM
LAUNDRY

VIEW OF GROUND FLOOR AS SEEN FROM THE LAKE FRONT

LIVING ROOM'S LIGHT FURNITURE PRODUCES AIRY LOOK

ENTRANCE COURT ON UPHILL SIDE PROVIDES DIRECT ACCESS TO LIVING ROOM
40 HOUSES OF CONTEMPORARY DESIGN are built for New York veterans. Developer Williams moves the ranch house East, proves that livable dwellings can still be built under Federal price ceilings.

While most builders in New York's traditionally high cost metropolitan area have been arguing that even a two-bedroom house cannot be built under the government's $10,000 price limit, a notable few have proved them wrong and have thrown in an extra bedroom to boot. Proof enough that New Yorkers can still get a lot of house for their money is the 40-unit project of Builder Cy Williams in Roslyn, Long Island, about 30 parkway minutes from midtown Manhattan. Moreover, through contemporary design, Williams has made his 1,089 sq. ft. houses seem even more spacious than they are and has put them in a class by themselves as far as appearance and livability are concerned.

Admittedly patterned after the much-ballyhooed Postwar House of California's Fritz Burns (FORUM, May, '46, p. 97), Williams' design features many departures from Eastern small house tradition. Spread out like a ranch-house, the building occupies but one floor, and its 48 ft. width is accommodated by a 66 ft. lot. High windows across the front and along the bedroom sidewall light the rooms, insure privacy, improve ventilation and permit various furniture arrangements. Large windows open the living room, master bedroom and kitchen to the patio at the rear. An oversize attached garage provides space for storage or a workshop, and a kitchen of ideal shape and generous dimensions makes room for laundry and bathroom, linoleum, Armstrong Cork Co.; other floors, paint. GARAGE DOORS—overhead type, Crawford Door Co. HARDWARE—Schlage Lock Co. ELECTRICAL FIXTURES—J. B. Slattery & Bros., Inc. HARDWARE—American Radiator-Standard Sanitary Corp., Cabinet—G. M. Ketchum Mfg. Co. HEATING—radiant, hot water system. Soils—wrought iron, A. M. Byers Co. Boiler—Pacific Steel Boiler Div., U. S. Radiator Corp. Regulator—Minneapolis-Honeywell Regulator Co.

STREET SIDE OF HOUSE BENEFITS FROM SURE HANDLING OF FENESTRATION AND ROOF

The Architectural FORUM October 1946

Photos: Ben Schnall

Coverings—wallpaper. PAINTS—Truscon for taxes and $2 for insurance, bring the total to about $63 per month.

When Williams' factory gets under way, it will serve only the local market. For the time being, he plans to merchandise only one house—a duplicate of the one shown on these pages—constructed of frame panels—and to confine his activities within about 20 miles of his Huntington plant. Within this area he will contract to supply and erect complete houses on lots provided by purchasers.

Pointing to the success of Williams' budding prefabrication venture are his M. I. T. training in engineering, his practical building experience (once a carpenter's helper, he became the head of a firm which has completed several Long Island subdivisions) and his knowledge of prefabrication (during the war he supervised the building of prefabricated houses for industrial workers). Also in his favor is the fact that, in all of his house building operations, Designer-Builder Williams has tried to stay in front of his field—but not so far out front that he lost the public.

CONSTRUCTION OUTLINE

REAR WINGS OF HOUSE FORM THE PATIO, HAVE LARGE WINDOWS.

OF GLASS WITH DOOR AT DINING END OPENS LIVING ROOM TO PATIO.

BED BRICK WALL IN LIVING ROOM HOUSES FIREPLACE AND FURNACE.

PICTURE WINDOW IS SIMPLY BUILT.
FLORIDA FARMHOUSE designed for year round comfort in Everglades.

IGOR B. POLEVITZKY, Architect
TERRACE SHOPS, INC., Interiors

Located on a hammock in the Everglades some thirty miles northwest of Miami, Fla., this project is the owner's residence on a large modern farm. Since it is to be a year round residence, comfort was a decisive factor. Hence, the main face is turned to the south-southeast's prevailing breezes—and the whole front kept open by an ingenious system of screens, louvered jalousies and sliding glass doors. A handsome swimming pool lies directly off the porch.

The design is based upon surplus material which the owner was lucky enough to get from the Navy—6 x 12 in. and 10 x 12 in. timbers, and 4 in. planking. The structural scheme centers around the maximum span of these planks and beams. Its skeleton consists of solid wood columns and beams, assembled with countersunk steel plates. The slightly-pitched built-up roof consists of a single layer of 4 in. planking. Together with walls of Crab Orchard stone, this yields a construction well-suited to Florida's hot summers.
LIVING ROOM HAS WOOD CEILING AND FLOOR, STONE WALLS

DEEP SHADY PORCH PROTECTS THE LIVING ROOM FROM GLARE
TRI-LEVEL HOUSE is first of a speculative group for Long Island.

GEORGE NEMENY, Architect
GORDON B. ROTH, Builder

Occupying a typical 40 x 100 ft. suburban lot, this house is significant not only as an example of excellent design but also as one of a group of similar houses built speculatively in Long Beach, N. Y. The builder had ten such houses well under way when the government put price ceilings on residential construction, and he plans to start many more by the same architect as soon as the restrictions are lifted. Meanwhile, the initial ten have been sold at prices ranging from $18,500 (for the unit shown on these pages) to $40,000, including land.

Since zoning laws required side-yard setbacks of 5 and 8 ft., the width of the building was limited to 27 ft.—the long dimension of the bedroom wing, set across the main axis of the house and up nine steps from the living area. However, since the major wing of the house is only 16 ft. wide, a side-yard of above-average size results, and around this yard the house is designed. To reduce hall space and overall cubage and shorten the stair run between living and sleeping areas, the house is built on three levels, the garage and utility room being four steps below the living level.

The design features simplicity of detail, use of natural materials and reliance upon functional elements for decorative effect—note, for instance, heat-reducing glass canopy over the bedroom windows (see cover).
OPEN PLAN MAKES MOST OF HOUSE VISIBLE FROM LIVING ROOM: ENTRANCE AND BEDROOM HALL TO LEFT OF PARTITION, KITCHEN TO RIGHT

PROJECTING BEDROOM WING COVERS TERRACE WHICH, LIKE LIVING ROOM WINDOWS, MAKES THE MOST OF SMALL SIDE YARD
ETERAN'S HOUSE is economical and livable four-room unit.

THUR T. BROWN, Architect
WILLIAM MASSEY, Contractor

The design of the minimum house is by no means frozen by its small size and four rooms. Ampley demonstrated in this simple, attractive house in Tucson, Ariz. Without sacrificing economy (it cost $6,900 exclusive of lot), the architect varied the traditional arrangement of rooms to create two sheltered terraces that give the house a longer, lower, bigger appearance. Walks along two sides and terraces which they connect were poured as integral parts of the concrete slab foundation. Noteworthy economies include central location of the gas-fired warm air furnace and partial concrete floor in the oversized garage, which provides work space around the automobile. Volume: 12,000 cu. ft.

X-ROOM BUNGALOW is built on an H-shaped plan.

STER C. HAECKEL, Architect

Wrapped around a rear-yard terrace, this house in Marion, Ill. features an open car shed, convenient to the main and kitchen entrances. While the living room is at the front of the house, the position of the fireplace directs attention to the rear and the large window in the dining space. The living-dining area flows together, the only separation being a dwarf partition at the entry. Opening off the kitchen, the screened porch is handily placed for outdoor dining.

PROJECTING ROOF, EXTENDED TO GARAGE, FORMS SHELTER, EXAGGERATES HOUSE SIZE

VERTICAL OPENINGS IN CAR SHED CONTRAST WITH HOUSE'S HORIZONTAL CHARACTER
175 STANDARDIZED HOUSES in Houston spotlight the trend to modern design. Developer Farrington builds an integrated company to produce veterans' houses at high speed, low cost.

A mild Texas climate requiring minimum heat and insulation may help Houston's William G. Farrington Co. hold the cost of his 5-room houses to $5,300, but weather is not the determining factor. Integration within a single organization of talents in all fields of residential construction is primarily responsible for the low cost of the houses in the Southdale project as well as their functional planning and sound construction. Known locally as "community developers," the Farrington Co. with its staff of experts normally handles all phases of house building from land purchase and planning to sales and financing. With one unfortunate exception, this is the case at Southdale—to save time in the production of houses for veterans, the company bought the unsold section of a previously developed subdivision which had been unimaginatively plotted with straight streets and 50 x 100 ft. lots. From there on, however, no lack of imagination is evident in the 175-house project.

Realizing that standardization was essential to minimum cost, Farrington's design experts limited their efforts to eight basic floor plans of two sizes which are repeated with varying orientations, roof lines, entrance details, color combinations and other inexpensive but effective changes of face. And within these different floor plans various rooms and room arrangements are further standardized—the garage-utility room is always backed up against the kitchen, bathrooms are all of the same size and shape, and closets always occupy the same location in bedrooms.

Aside from site fabrication, construction of the house is conventional. Specifications are far from skimpy; they provide many conveniences and "extras" not found in most veterans' housing: hard-to-get oak finishes the floors, steel cabinets designed by the Farrington Co. provide adequate kitchen storage space, a wall heater in the bathroom augments the living room floor furnace, pressed steel doors of the overhead type (also designed by the company) enclose the attached garage, copper screens are provided for all windows, the driveway is concrete, and all porches, steps and walks are made of precast concrete sections. Month ago 75 houses were complete and the production rate was one per day. Having considerable effect on speed of construction as well as costs is the fact that 90 per cent of the materials and equipment going into Farrington's houses is manufactured within 100 miles of the site.

Although sales prices are about $550 per house higher than was anticipated when the project was launched early this year, they are still comparatively low for the space provided. The smaller unit (800 sq. ft. plus garage) sells for $6,250; the larger (900 sq. ft. plus garage) is priced at $6,900. When the $650 valuation of the average lot is subtracted from these prices and the 10 x 20 ft. garages are considered, costs come to about $6,25 per sq. ft., including overhead and profit.

All sales are limited to veterans and first priority is given to hardship cases. Each purchaser is required to make a down payment of at least $300; the balance is financed by the local Gibraltar Savings & Building Assn. with a single mortgage, half of which is guaranteed by the Veterans Administration. Monthly payments of about $40 amortize the loan in 17 years and include its 4 per cent interest. Taxes and insurance are $4.50 per month.

Credit for the many good points of the Southdale Project was earned by no single individual, but by the entire organization. Confronted with the usual lack of coordination between individual architects and builders in the small house field, William G. Farrington 15 years ago formed a company to handle all phases of community development for the Houston market. He employed architects for the design staff, then trained them in the field alongside a construction organization headed by engineers and experienced construction superintendents. Goal of this integration of talents was to produce quality houses economically through efficiency of design and construction and without duplication of effort. That the Southdale project comes close to meeting it...
LOW CLAPBOARDS ILLUSTRATE USE OF VARYING EXTERIOR FINISHES

MOST WORKABLE DESIGN HAS GARAGE ECONOMICALLY CLOSE TO STREET

CONSTRUCTION OUTLINE

FOUNDATIONS—cylindrical concrete piers cured in paper forms, Sefton Fibre Can Co.


PAINTS—U. S. Gypsum Co., John W. Masury Co. and Pittsburgh Plate Glass Co.


ELECTRICAL INSTALLATION: Switches—Arrow, Hart & Hegeman Electric Co.


BATHROOM FIXTURES: Cabinet—Philip Carey Co.


WATER HEATER—Mission Water Heater Co.
VETERAN'S HOUSE has handy layout heated by electric coils.

VAN EVERA BAILEY, Architect

This veteran's house would merit notice if only because it was completed this year at a contract price of $7,650 or $63.00 per sq. ft. It has in addition, however, good looks, good layout and a novel method of heating. Located near Portland, Ore., it is built entirely of wood and includes several modest but interesting structural details. Floors are framed in 4 x 6 in. joist, 4 ft. on centers, with a 2 x 6 in. T & G common subfloor. This is topped by plywood and linoleum in kitchen and bath, and by hardwood and carpeting elsewhere. Although frowned upon by the underwriters and feasible only in public power areas, the successful radiant heating is by means of electric resistance coils imbedded in ceiling plaster.
THE SHED ROOF GIVES GREATER CEILING HEIGHT, LARGER WINDOW

LIVING ROOM HAS PITCHED ROOF, REMAINDER IS FLAT

TWO PLASTERED CLOSETS SCREEN KITCHEN FROM LIVING ROOM

WHERE ROOFS ARE FLAT THEY HAVE NO PITCH AT ALL. THIS GREATLY FACILITATES FRAMING
HOUSE in Pasadena provides gracious living in a minimum package.

WHITNEY R. SMITH, Architect
THEODORE VAN FOSSEN, Collaborator
RAYMOND GERHART, Contractor

An example of the simple, compact solution which can bring even a postwar house within reach of the average budget is the trim California bungalow shown here. Into 1,300 sq. ft. of space the architect has squeezed two bedrooms, living-dining room, kitchen, ample storage areas and a carport. The cost: $7,000.

The economy of the house rests partially on its one-story basementless plan; partially on its simple, in-line arrangement; and partially on its concrete and plaster construction which uses only a small amount of wood. An uncomplicated shed roof not only cuts costs, but gives to the rooms a feeling of spaciousness in spite of minimum footage. Next to the carport a storage wall provides convenient space for trunks and garden tools which usually line the interior of a garage.

An improvement in exterior good looks will come when Garrett Eckbo completes the landscape gardening, providing a fenced court of planting and paving. Eckbo's plan will retain existing trees but trim them to above-head height to allow use of the ground below.

SUNNY KITCHEN CONNECTS WITH DINING AREA OF LIVING ROOM. SLIDING PANEL ABOVE CUPBOARDS AIDS IN SERVING
CONTINUOUS GLAZED FRONT PROVIDES SOUTHERN EXPOSURE FOR ALL ROOMS. SEPARATE ENTRANCES MAKE EACH INDEPENDENT UNIT.

LUXURIOUS USE OF GLASS AND BUILT-IN STORAGE CAME WITHIN THE BUDGET BECAUSE OF OVER-ALL ECONOMY OF PLAN.
Education and health are fields of architectural design rarely approached with a sound grasp of the problems involved. Libraries are notoriously badly lighted. Hospitals and clinics are often designed without the thorough research necessary to devise an efficiently functioning layout. Although little of this type of work has been completed since the war, the jobs which have been finished indicate a healthy emphasis on fundamental requirements, less concern with superficial design treatment.
SMALL LIBRARY of 5,000 books doubles as exhibition room.

ELSA GIDONI, Designer
FRANKWILL BLDG. CORP., General Contractors

The first floor of a building belonging to the Council for Pan-American Democracy has been converted into a combination library, reading room and exhibition hall for traveling Latin-American displays. Before alterations the space was chopped into three small rooms, cut off from the corridor and badly in need of repair. Now the separate areas have been thrown into one long gallery with reading tables at the front and rear, exhibition and newspaper racks in the center and bookcases lining the rear and side walls. By removing the tables the new library can be converted into a lecture hall. A rolling movie projection screen is concealed beneath a wooden baffle at the front.

SUSPENDED EGG-CRATE TROUGHS ILLUMINATE THE BOOKSHELVES AT REAR

CURVED LIBRARIAN'S DESK IS NEAR GLASS-PANELED ENTRANCE

SPECIAL MAGAZINE RACK ALSO PROVIDES DESK SPACE
DORMITORY houses fifty school employees in homelike surroundings.

ALONZO J. HARRIMAN, Inc., Architects
STEWART & WILLIAMS, General Contractors

As part of an overall expansion program, Maine’s State School for Feeble Minded at Pownall has completed this new dormitory. The new building—which accommodates fifty unmarried employees, two to a room—represents an intelligent effort to provide comfortable, pleasant living accommodations at moderate rents. Each bedroom is equipped with built-in cases containing wardrobes, dressers, desk and lavatory (showers and toilets are grouped on each floor). On the ground floor a large, sunny living room and adjoining kitchen provide space for off-duty relaxation.

SMALL SCHOOL achieves good plan and lighting on meager budget.

EUGENE R. MEIER, Architect
MITCHELL THOMAS, General Contractor

The new Todd Grammar School near St. Joseph, Mo. was built on the foundations of a burned-out older school, and was restricted by the tightest of budgets. Center of a lively community controversy—an adjacent country club wanted the school moved to another site; a bond election to finance the move failed—the finished project shows what ingenuity can accomplish. Each of the three classrooms is well-lighted by continuous, ceiling-height wood sash and the central hall by a clerestory. A full basement provides a playroom for bad weather, a boys’ toilet and a furnace room for the forced air heating system. Finished in February of this year, the cost of this little building for 60 students and three teachers was held to $.35 per cu. ft.
CLINIC on a sloping lot accommodates ten doctors in five suites.

NARAMORE, BAIN,
BRADY & JOHANSON, Architects & Engineers

The latest in the rash of doctors' clinics breaking out all over Seattle, this project is located near the city's leading voluntary hospital and was tailored to meet the requirements of ten doctors, most of whom are on the hospital staff. A similar building a half block away was completed before the war; two others are under construction nearby and three more are building in other parts of the city—all typifying the current decentralization of doctors' offices to suburban areas or hospital neighborhoods.

Making the most of a steeply sloping, irregular lot served by streets at front and rear, the architects created a sizable planting area by setting one wing of the building back from the main street and converted "basement" space into two small offices, opening up the rear wall with large windows and a secondary entrance. Containing a total of 76,900 cu. ft., the building cost $70,000 exclusive of land, landscaping and furnishing.

GENERAL HOSPITAL in Houston contains 1,000 beds, ranks as Navy's newest and largest. Its 37 buildings cost $11 million.

ALFRED C. FINN, Architect
ROBERT J. CUMMINS, Consulting Engineer
REG. F. TAYLOR, Mechanical Engineer
JAMES STEWART CONSTRUCTION CO., General Contractor

Dedicated last month, the Navy's largest permanent hospital is the first major postwar construction project to be completed in booming Houston, Tex., fifth most active building center in the U. S. The medical buildings proper are laid out symmetrically near the center of a level, almost barren tract and oriented so that one side of each ward building enjoys the southern sun and prevailing breeze. Flanking the medical group are accessory buildings including, in addition to those pictured to the right, a corpsmen's building, a cooks' quarters and a residential building for civilian technicians—all two-story units.

Executed in a style called "conservative contemporary," the medical buildings are faced with buff brick trimmed with Texas shell-stone and darker spandrels of terra cotta. Windows are aluminum. Inside, terrazzo floors contrast with a wainscot of structural glazed tile and a suspended acoustical ceiling.

Connected to the taller buildings with enclosed corridors, the one-story ward buildings are classified as "temporary" but, due to the lumber shortage, are of relatively permanent construction. Floors and roofs are reinforced concrete; walls are of 8 in. structural tile glazed on the inside surface.
Bachelor officers' quarters have large screened porch.

Boiler house (and laundry) supplies steam to all units.

WAVES' quarters are in one of two H-shaped units.

Nurses' home for 200 is largest of residential units.

STORY WARD BUILDINGS AND THE SPRAWLING SUBSISTENCE AND WELFARE WING. TO THE SOUTH (LEFT) ARE 14 LOW WARD BUILDINGS.
It is evident to any casual pedestrian that store design has undergone a minor revolution in the past few years. The open front which made such a splash in the late 30's is by now commonplace. It is no surprise, therefore, that the first sampling of postwar commercial building should be characterized by the large glass wall. More important, the open front idea is at last being handled with a mature grasp of the lighting and design problems it involves. This new sureness represents a real step forward in contemporary store design.
WOMEN’S SPECIALTY SHOP
uses a concentration of light as
a customer come-on.

GRUEN & KRAMMECK, Architects
JACKSON BROTHERS, Contractors

The new Graysons Shop in Hollywood represents the ultimate in competitive store front design. Located on King’s Road, a boulevard of brightly lit shops, Graysons was faced with the problem of outshining its neighbors. This was the more difficult since conditions in the lease limited its front height to one story, a restriction not applied to surrounding shops. A continuous sign background was therefore worked out, consisting of single strip neon tubes on 4 in. centers which extend down the narrow front and along the arcade ceiling to the far edge of the show windows. As a result of this imaginative treatment, the handicapped store has achieved one of the most brilliantly lit fronts on an already bright street.

Interior lighting combines cove wall installations with direct ceiling spots which do not illuminate the store to a brilliance corresponding with the exterior. Thus, the effect is of walking through an intensely bright gallery into a darker store.

Other features of the interior design are more commendable. A long, narrow space has been effectively utilized by placing merchandise along the wall in specially designed cases and counters. Only infants’ wear and the wrapping desk are free-standing units in the central area.
TAILOR SHOP uses interior as show window, mirror wall to double size.

Designed by:
EUGENE BACK and THEODORE YONKLER
THEODORE YONKLER CO., INC.,
General Contractor

Usually descended from the conservative British, tailors have been among the last of the trades to swing to contemporary design. Moreover, tailors have shied away from modern, open shops because they have no completed merchandise to display. Cutting a new pattern for the rest of the trade is this Fifth Avenue shop of Richard Bennett Associates, Inc., in New York City. Its interior doubles as the show window—an inviting display of fabrics for men's suits. One complete wall of the sales room is lined with sliding racks from which fabrics are draped and which are readily viewed by those approaching the shop from the right. A huge mirror on the other wall presents the same picture to passers-by approaching from the opposite direction and increases the apparent size of the narrow shop. A curved open display at the end of the sales room screens the fitting and garment rooms and manager's office from public view.

Since the customers of Englishtown Cutlery, Ltd.'s new showroom on New York City's Fifth Avenue are mainly buyers from department stores and retail cutlery houses, its design is basically different than that of retail shops. Not catering to the pedestrian public, the company has no need for show windows, and therefore the columns of the existing facade were retained to preserve the homogeneous character of the office building. In place of show windows, a large, handsome entrance was provided.

Interior of the showroom features a battery of identical niches, each an independent unit containing a complete set of samples. Every niche is equipped with a desk, chairs, display trays which are stored in wall cabinets and a shadow box for the display of featured articles. Division of the showroom into these self-sufficient "sales rooms" permits the simultaneous service of at least four customers, and the repetitive design, exaggerated by the mirrored wall at the rear end of the showroom, creates the desired atmosphere of simplicity and precision.

FURNITURE STORE is opened to sidewalk by a recessed wall of glass.

J. A. FERNANDEZ, Architect
STANGER BROS., General Contractor

When shoppers visit the 34th Street store of New York City's Modernage Furniture Co., they are practically inside the showroom before they open the front door. Recessed and protected from the elements, the glass front extends the entire 55 ft. width of the building and provides an unimpared view of the merchandise displayed inside. The glass is set at an angle, intended to lead window shoppers to the door.

Color of the framing terra cotta strikes a lively note among the drab shop fronts which characterize the street. The wide band against which the white metal lettering is silhouetted is a turquoise green, as is the finish of the two supporting columns. Carried to the front as a narrow band of trim, the entrance soffit and reveals are finished in contrasting off-white terra cotta.

Although the store does not make the most of its glazed front from the esthetic point of view, it is exploited to the fullest from the merchandising standpoint. Thus, the forward part of the floor is cluttered with displays of countless knicknacks (mostly glassware) whose variety, small size and relatively low cost interest more people than would a suite of modern furniture. Once inside, shoppers are attracted by displays of progressively larger, more costly items to the rear of the store where furniture is set in model rooms.
SPECIALTY SHOP displays fancy shoes and a view on balcony, accessories on street level.

CARSON & LUNDIN and HARRY E. DAVIDSON & SON, Architects

Commanding a splendid view of Boston Common across the street, the Guild Shop illustrates a new trend in shoe store design, influenced by the increasing tendency of such shops to sell more than shoes. In fact, the major emphasis is placed on the display of accessories (casual shoes, gloves, pocketbooks, etc.) which is located on the ground floor, separated from the sidewalk by a glass wall. Of balcony-like construction, the second floor of the air conditioned building is more luxurious and roomy, in keeping with its more expensive merchandise. The angular facade not only tends to accentuate the entrance but also permits the front door to swing out (in accordance with local code requirements) without interfering with sidewalk traffic. Name of the shop is derived from the fact that it is the consolidation of several smaller shops.
SHOE SALON on New York's Fifth Avenue is designed to exploit the possibilities of the open front.

KETCHUM, GINA & SHARP, Architects
B & S STORE FIXTURE CO., Contractors

When a store becomes a display case why not design it as such? This is the reasoning behind Manhattan's new Florsheim shoe shop which, for the first time, takes full advantage of the open front plan. The sacrifice of precious store frontage to allow a deep and continuous setback has proved an effective customer lure, permitting unhurried window shopping and a clear view of the "display case" interior. Equally important is the ceiling illumination, a mass of fluorescent tubes concealed behind closely-spaced egg-crate louvers, and providing more than 75 foot-candles of light on the selling floor. Thus, illumination is brought sufficiently above the intensity of outside reflections to permit easy vision into the store. Movable mazda spots are used to accentuate displays and create ceiling color changes, another important feature when the entire shop is treated as a show window. Part of the same plan is a drapery wall finish which can be varied for seasonal atmosphere.
ISOMETRIC shows arrangement of accessory counters near front of store with shoe sales department in the rear. Long, narrow plan might seem cramped without the corner location which permits windows on side.

CASHIER'S DESK CONCEALED IN CORNER

IS ILLUMINATED THROUGH OVER-ALL EGGCRATE LOUVERS. WALLS ARE OF WALNUT 1/2-ROUNDS AND CONTRASTING PATTERNED DRAPERIES.
WOMEN'S APPAREL SHOP hides behind a four-story architectural trade mark.

ROSS FRANKEL, INC., Designers and Builders

Most interesting aspect of the new Virginia Dare store in Kansas City, Mo. is its facade. "The front was not designed merely as another store front, but as a personalized front which would aid in identifying other stores in the chain . . . Something to be remembered." To make it different and therefore memorable, the designers covered the front with 30 large squares of porcelain-enamed sheet metal. Prefabricated in panels at the factory, the material was selected for its light weight, facility of erection and ease of maintenance.

Like the facade, the deep entrance recess belies the original 1900 structure. Only the supporting columns remain, and they have been finished with mosaic and used to support exterior displays which augment the show windows on either side.


OPEN PLAN ADDS FORMALITY TO FUR SALON

LIGHTED DISPLAY PANELS DECORATE WALLS

FACADE OF HUGE CHAMFERED SQUARES CONTRASTS WITH NARROW SHOW WINDOW AND CIRCULAR LIGHTING RECESSES ABOVE ENTRANCE

CURVED COUNTERS DEFINE SALES SECTIONS
AUTO SALES AND REPAIR SHOP is glass-enclosed for attention.

RICHARD J. NEUTRA, Architect
BENNY HUGHES, General Contractor

The site of this North Hollywood, California project had considerable effect upon its design. The corner lot is bounded by a major boulevard and a side street which leads to another heavily trafficked boulevard. Since the site is located in a relatively open suburban neighborhood, it is easily seen from both of these important streets. To make the most of this visibility, the front and side of the showroom were completely enclosed with glass. Further aimed at attracting the public's eye is the location of the repair shop, in such a position that drivers of ailing automobiles must pass the display of new cars (eventually Kaiser-Frazer).

Completed last June, construction of the building was influenced by the availability of materials. The building proper is roofed with composition materials on wood sheathing and joists, while the projecting shelters are made of steel girders covered with 18-gauge aluminum.

FLOWER SHOP provides display spaces inside and out.

Making the most of a narrow downtown lot (32 ft. front) in Jenkintown, Pa., the architects set this flower shop back from the sidewalk and thus created a sheltered outdoor display space for potted plants. Cut flowers displayed inside the shop are easily seen from without, for the only separation is a wall of prefabricated panels of double glass. The brick and stone walls running through the glass front add to the garden atmosphere and further integrate the two display areas.
SHOW ROOM of toy train wholesaler serves public and buyers alike.

JOSEPH ARONSON, Designer and Decorator

Intended to fascinate the public as well as buyers for retail stores, the second-floor show room in the New York City offices of Lionel Trains presented several peculiar problems to the designer. Most important were the requirements for free circulation, lighting and protection of exhibits. Arriving on the show room floor by elevator, visitors pass through an entrance lobby dominated by the front of a 7/10 scale locomotive set against a background of black glass. Leading to the main exhibit room is a museum corridor displaying early train models and innumerable wartime gadgets. The exhibit floor features a large scale model created by the Museum of Science and Industry for educational purposes; a secondary action display on a small island table (picture, below) is used for selling.

Variation of ceiling levels helps achieve effective lighting. The lower ceiling contributes direct light over the aisles through numerous incandescent flush fixtures spaced in a random pattern and, over the main exhibit, through a lattice pattern of fluorescent strips hung low in a black well. Side aisles are also indirectly lighted by fluorescent cove fixtures, and each display case is illuminated by fluorescent tubes close to the merchandise.
Since paint cans do not lend themselves to attractive display, the design of a show and sales room for such merchandise must, in itself, be the major attraction. Thus, the "Plastic Center" of Cello-Nu Products in New York City relies on its unusual design and color styling to attract retail and wholesale customers for its plastic paints. Moreover, its extremely "modern" design is intended to symbolize the promising future of the relatively new plastics industry. (While merchandise is currently limited to paints, it may be expanded to include other plastics products.)

To reduce the apparent height of the narrow store and to spotlight the various display tables, lighting fixtures are dropped 11 ft. and painted a strong vermillion in contrast with the almost-black ceiling. Further to exaggerate the actual size of the shop and to relieve its barn-like proportions, the partitions separating the offices from the sales room are limited to 6 ft. in height. Show window platforms and backdrops are kept low, so that the design of the store interior is clearly visible from the sidewalk. Separate entrances are provided for wholesale and retail customers.
THREE WELL-FRAMED WINGS SHADE PATRONS OF THIS DRIVE-IN CAFE FROM THE HOT ARIZONA SUN

TWO ROADSIDE DRIVE-INS use light framing and lots of glass

ARTHUR T. BROWN, Architect

The far west has long been famous for its roadside eating places. It now begins to seem that good looks must be added to this reputation of extravagance and numbers. At any rate, these two drive-in establishments at Tucson, Arizona indicate that the roadside stand is as valid a subject for architectural talent as any other building type. The two jobs have many qualities in common: large glass areas, amply shaded; interiors clearly visible from passing cars; bright colors and sharp distinctive forms which are themselves eye-catching. The larger of the two cafes (above) has three projecting sheds which provide shaded curb-service for 12 cars in addition to the short-order counters inside. The smaller one (right) has ample parking space, none of it shaded, and a semi-circular counter inside. Both are air conditioned; both are largely fabricated of metal and glass, though the service areas of the Red and Blue are of concrete block plastered on both sides. And both are admirable for restraint and simplicity in a type of building where exuberant neon is too often substituted for a little common sense.
DOWNTOWN BUTCHER SHOP uses new display techniques on office trade.

OLTON WHITE, Architect
EORGE KOSMAK, Associate
ACDONALD, YOUNG & NELSON, Contractors

Controlling factors in the design of this re-modeled San Francisco meat and delicatessen store were its special location and clientele. Situated in the heart of the downtown business district, the shop's customers are almost exclusively office workers in the vicinity. Many of them eat lunch in the cafeteria at the rear and shop on their way out; others order by phone; and nearly all of them pick up their purchases after work. Thus, the operation the architects faced was unusual. Separate sections had to be provided at the front for meats, poultry, seafood and delicatessen foods. The counter and cafeteria at the rear had to handle the important luncheon trade, with the kitchen cannily used afterwards for the preparation of delicatessen foods. A full-sized mechanized cutting shop had to be installed.

Aside from a workable plan, the architects sought to give the shop an appearance of simplicity and unity, inside and out. This they have accomplished by careful detailing of fixtures and cases, by standardized signs and by good general and display lighting. The latter, incidentally, uses a mixture of 75 per cent white and 25 per cent cerise fluorescents.

THE REFRIGERATED SHOWCASES HAVE DOUBLE GLAZING TO ELIMINATE FROSTING

LIGHTING IS TINTED PINK TO FLATTER MEATS

NEW FACADE IS IN DARK TURQUOISE FERRO ENAMEL WITH LEMON YELLOW TRIM, MARQUISE IS DARK CHERRY RED

Photos: Philip Fein
A REMODELED SHOP in Berkeley demonstrates value of open front.

JOHN CARL WARNECKE, Architect
HANS C. JENSEN, General Contractor

The sheer glass front of the remodeled home of the Camera Shop at Berkeley, Calif., is almost literally uninterrupted from sidewalk to ceiling. Only a low stone planting box serves as a curb at the bottom while, at the top, the cold cathode lighting actually penetrates the plate glass through holes drilled for that purpose. The result is a shop whose whole 30 ft. by 60 ft. interior is a showcase. The owners confess that they were a bit afraid of the design at first—"we really expected a certain amount of adverse criticism," they say, "for we thought anything as new as this might be a little too different to have universal and immediate acceptance." They were wrong, however; "the response of the public has been remarkable . . . resulting in greatly increased store traffic with a corresponding rise in sales volume."

Using the same location as the previous shop, but with twice the frontage, the architect has achieved a crisp, bright attention-commanding job. The black structural glass of the street front is repeated inside in counter and table tops. Floors are brick red linoleum, walls are corrugated asbestos, painted chartreuse and ceilings acoustical tile; all woodwork is maple veneer in natural finish. Columns are sheathed in stainless steel.

PHOTO: PHILIP BERN

RECESSED STREET FRONT MAKES A SHOWCASE OF ENTIRE SHOP

STAINLESS STEEL AND BLACK GLASS ADD SPARKLE TO INTERIOR COLORS OF CHARTREUSE AND RED
These two views of the service department of Central Motors, Shreveport, La., clearly indicate (1) the clean, simple beauty of Ro-Way Overhead Type Doors, and (2) how Ro-Way Doors leave sidewalls and floor completely clear.

Architect—Henry E. Schwartz, Shreveport, La.
Contractor—Ed Brookhau, Shreveport, La.

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Write for your copy of this informative guide to "Electrical Modernization"
Earthen pottery developed by Florence Forst has an attractive, crisp appearance and is rationally designed to make meals easier to prepare, easier to eat.

Textiles designed by Dorothy Liebes for Goodall Fabrics, Inc. add a colorful note to the Museum exhibit. Originally conceived and executed on hand looms, all materials were designed with a view to preserving the hand-loom effect in their power-loom reproduction at the Goodall factory. Some, like “fleeceweave,” a sheer light-diffusing web of mohair in clear red and light blue, are outspoken drapery materials. Others, like the special fabric developed for a railroad company, a heavy undyed beige plush, are distinctly upholstery cloths. Although she has woven some for Goodall, none of Miss Liebes’ famous metallic fabrics are included in the display.

Storage cases by Morris Sanders, much publicised (FORUM, Sept. ’46, p. 11) and much advertised by the Mengel Co., are the feature of the show. Called “Mengel Module,” the furniture is comprised of five basic units, all of which were
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used to build up the wall piece illustrated on page 152: flat base, deep case (with half doors), flat case (with drawer), shallow case (with grille door) and wide shallow case (with shelf). Accessories include legs and additional bases on which the basic units may be placed to form tables, chest cupboards and an array of other pieces limited only by the buyer's imagination. An ingenious connector holds the units together, permits them to be assembled in tension or compression, cantilevered or hung.

Unit furniture designed by Edward Wormley also emphasizes flexibility. Produced by Dunbar Manufacturing Co., the upholstered pieces are made of sectional units of foam later on resilient plywood runners. Each runner is cramped so that it will not act like a rocker when placed on an uneven floor—it has only two points of contact with the floor. Available in three sizes (single, double and triple), the unit can be combined to provide continuous seating.

THE WALKER ART CENTER in Minneapolis leads the Midwest these days with good exhibitions. They have just concluded their Third Annual Purchase Exhibition, titled "Recent American Painters Today," and, judging from the catalog it is a fair better interpretation of the American scene than has been assembled in the ambitious, highly publicized calendar competitions which receive so much attention. They have selected a good sprinkling of styles—from Julian Binfords to George K. Morris—and most of the artists are well-established in reputation, well-grounded in the representational. Such well-known names as Edward Hopper, Charles Burchfield, Boardman Robinson are included. There are some excellent pictures by painters not quite so famous—notably Vernon Smith's harbor scene, which is highly comparable with Stuart Davis' excellent harbor scene also reproduced, and the charming, Matisse-like group by Margaret Stark.

BOOKS


From England comes an enlarged edition of a work plugging the industrial designer, which first appeared in 1934. It makes one think of Henry Wallace's stand that we needn't go all-the-way for everything British. As Mr. Gloag himself says, Herbert Read's 'Art and Industry' still remains the authoritative work on English industrial art.

According to the author, the industrial designer "is not a stylist ... not a 'putter-on' of sleek disguises for ill-planned or outmoded articles." To correct the unfortunate lapses of nineteenth century design brought about by the industrial revolution, Mr. Gloag says, "Progressive manufacturers should regard industrial design as a technical operation and employ the services of an industrial designer in the same normal businesslike way they would employ the services of a research chemist or a sales manager."

To explain industrial art, he takes the reader back to the Greek orders of architecture and on through the English D.I.A.—Design and Industries Association—founded in 1919 with the creed "fitness for purpose." Admitting that the English "have never had the leadership in industrial design which the United States has attained," Mr. Gloag throws great deal of blame on William Morris. But in condemning Morris (with whose social ideas he doesn't sympathize), he states that "in Europe William Morris was taken far more..."

(Continued on page 158)
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"Since we painted our plant according to the principles of Color Dynamics," writes R. A. Dejur, president of this company, "morale of our employees has improved. Our production has also improved because we now attract a higher type of help. The attractive appearance of our plant is winning many enthusiastic compliments not only from our staff but from customers and suppliers as well."

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Subtitled "Researches on High Density Development," this study prepared under the auspices of the Chadwick Trust is a comprehensive analysis of the case for the row or attached house. Text and plates concern themselves with all phases of floor and site planning and, although strongly colored with problems and practices peculiarly British, they present much that is of interest to U.S. architects and town planners.

Main object of the work was to present a practicable alternative to the building of apartment flats in central urban areas such as is now required by legislation in London and other large provincial cities. These regulations, prescribing that the density of self-contained dwellings in central zones be less than 12 per acre and that certain minimum distances between the fronts and backs of houses be maintained, have practically outlawed the economical row house in English cities — the only type of house that could have been built on expensive urban sites. With his detailed sketches of floor and site plans, architect Edwards attempts to prove (and with considerable success) that, properly handled, the terrace or row house could once again become the important building type it was a quarter of a century ago, and that authorization...
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**Fact #2**

Twinwindow saves money on heating and air-conditioning

Twinwindow with two panes of glass has more than twice the insulating efficiency of ordinary windows. With three or more panes, the insulating efficiency is still further increased. This saves money by reducing the load on heating and air-conditioning equipment. It banishes many restrictions which used to limit the size of windows.

**Fact #3**

Twinwindow makes any building more comfortable and more healthful

It helps to maintain proper temperature and humidity levels. And it virtually does away with downdrafts near windows.

**Fact #4**

Twinwindow is designed to prevent fogging or condensation on the glass

Except under extreme conditions, its sealed-in air space assures window transparency in any climate. This makes Twinwindow a "must" wherever clear vision is important... picture windows for homes, store front display windows, large windows in office buildings, factories and institutions.

**Fact #5**

Twinwindow can be handled, installed and cleaned as simply as a single pane of glass

It is a one-piece window unit, completely assembled at the factory.

We regret that current production is not meeting demands. Deliveries must continue slow until new facilities are completed. When planning new construction or modernization, we suggest you get in touch with our nearest branch to determine if our delivery schedule will permit your use of this finest of insulated windows.

"PITTSBURGH" stands for Quality Glass and Paint
Please send me, without obligation, complete facts about TWINDOW, the window with built-in insulation.

Name: ____________________________
Address: __________________________________________
City: ____________________________ State: ____________________________

Pittsburgh Plate Glass Company
2378-A Grant Building, Pittsburgh 19, Pa.

Please send me, without obligation, complete facts about TWINDOW, the window with built-in insulation.

Name: ____________________________
Address: __________________________________________
City: ____________________________ State: ____________________________
The Fiat Zephyr is a high quality shower door designed for service in finest installations. Yet the moderate cost of the Zephyr permits it to be used extensively on all types of shower cabinets and built-in showers.

Practical features in design and construction developed through twenty-five years' experience in building shower equipment are incorporated in the Zephyr door. For example—the water deflector with gutter prevents water dripping on the floor when door is open after taking shower, full length piano hinge, bullet type catches that eliminate possibility of door binding, and offset handles are features found only in the best type of shower door construction.

Economical manufacturing methods and volume production enable Fiat to offer to the trade a shower door of high quality at a moderate price.

CONSTRUCTION FEATURES

Frame: One-piece heavy aluminum alloy.
Jamb: Heavy aluminum alloy.
Hinge: Specially constructed, continuous aluminum piano hinge.
Lock: Two bullet catches, prevent door binding.
Gasket: Clear glass, set into a heavy rubber "U" channel.
Handles: Special offset design on both sides of door.
Water Deflector: Made of heavy aluminum alloy with gutter to prevent water from dripping on the floor when the door is opened after taking shower.
Grille Vent: One-piece heavy aluminum bar.
Finish: Satin "Alumilite."

STANDARD SIZE

- The standard size (24" x 72") door is built to fit an exact opening 24 inches wide by 72 inches high. All other opening sizes require a specially built door. When ordering a door, state the size of the opening, model, hinging (either right or left when facing), and whether for tile, structural glass, marble or FIAT shower cabinet.

CONSTRUCTION DETAILS

The water deflector with gutter prevents water dripping on the floor when door is opened.

 FIAT METAL MANUFACTURING COMPANY
21-45 Borden Ave., Long Island City, N.Y.
125 East 23rd St., New York, N.Y.
21-65 Sardan Ave., Los Angeles, Calif.

Now Available

It has been a long time since a work on city planning has appeared with the sanity, broad approach and simple clarity of this one. As the authors point out in their introduction, it is not to be regarded as encompassing the entire field of city planning, since this would entail huge volumes of work by many men in various fields. Its purpose is to illustrate the need for a method of developing new city patterns, for land use flexible enough to accommodate the most advanced techniques and inventions as they are developed. Refreshing is the fact that, greenbelts notwithstanding, the book follows no highbrow professional tenets, has no axe to grind.

It opens with an irate dissertation on the evils and causes of urban blight, the menace of uncontrolled decentralization. Immediately following is the biggest surprise of all. Instead of shoving a few dry and curing pages on administration and finance just inside the back cover, as is the custom, these subjects are given a front-row seat, treated boldly and generously. In discussing the metropolitan planning commission, its framework and function, a strong plug for federal, state and municipal cooperation is put in, since few people seem to realize that these three levels of government should be, ideally, interdependent parts of a single governmental institution or instrumentality. Reviewing the desirability for federal participation, the authors say: "Nearly every action of the federal government has its impact at local points throughout the U.S., and, because so many leaders now live in urban communities, perhaps one-half of all federal actions have points of special impact in urban areas . . . Federal participation in metropolitan planning, based on federal interest, responsibility and financial aid, is as fully justified as federal regulation of interstate commerce. In terms of human welfare and of economics, inter-municipal problems within metropolitan areas are as complicated and important as inter-state problems . . . The confused and conflicting status of local government has been discussed not with the thought of suggesting reforms, but rather to explain why there are so few comprehensive plans in existence which provide for the coordinated development of urban areas. It is too late now to hope to consolidate, unify or integrate local government in order to facilitate the planning of public works for the postwar emergency. But it is not too late to bring about working relationships between the local political units of metropolitan areas, with a view to effecting coordination and cooperation in the planning and execution of public works programs for and during the rapidly approaching unemployment emergency."

These arguments may seem too far-reaching to be immediately understood. However, no one is more aware than Messrs. Sanders and Rabuck of the indispensability of public comprehension and support. In this connection they offer the professional a sound bit of customer psychology: "The ordinary planning technician knows little about planning news. He apparently thinks the average citizen will read articles dealing with statistics, sunlight and the philosophy of planning. What he really wants to know is: What is being done? What is going to be done? How will these developments affect me? People are interested in their own children, their own property, their own neighborhoods, their own workshops and recreation facilities, their own health, safety and such construction would involve no compromise with hygiene, comfort and appearance. J.H.
Look for Unwritten Specifications, Too

There are written and unwritten specifications. The ones by which size and shape and breadth and depth are regulated are the written specifications. The ones upon which prestige is built are the unwritten specifications.

Speed, load, car size, controls, such terms as these are familiar in the written specifications for an elevator.

Safety, satisfactory service, economy of operation, long life, these are associated with the unwritten specifications of an elevator or escalator manufactured by Otis. They are the end results of the skills perfected by experience and the determination to provide the finest vertical transportation possible.

Otis Elevator Company
Offices in all principal cities
"Yes, I knew this was the house for us. Oh, it wasn't the Frigidaire Refrigerator and Range and Cabinets alone that decided us—it was what they stood for. We KNOW Frigidaire, and seeing appliances of such quality in the kitchen somehow gave us confidence that the entire house had been designed and built RIGHT."

Many a home-buyer—yes, and many a renter, too—has felt more assurance about a house because he saw the familiar FRIGIDAIRE nameplate on important electrical appliances. For it's only natural to assume that if such quality and dependability have been put into one part of a house, the same kind of quality and dependability must have been built into all parts of the house.

Isn't this a fact well worth considering the next time you specify electrical appliances? Many architects and builders do consider it—that's why they specify FRIGIDAIRE, a great name in home appliances for more than quarter-century.

Send today for literature—pictures, dimensions, descriptions—on:

- Frigidaire Refrigerators
- Frigidaire Electric Ranges
- Frigidaire Electric Water Heaters
- Frigidaire Home Freezers
- Frigidaire All-Steel Kitchen Cabinets
- Frigidaire All-Steel Cabinet Sinks

Write Frigidaire, 863 Amelia Street, Dayton Ohio. In Canada, 590 Commercial Road, Leaside 12, Ontario.

You're twice as sure with two great names

Frigidaire made only by General Motors

REFRIGERATORS • ELECTRIC RANGES • WATER HEATERS • HOME FREEZERS • KITCHEN CABINETS
AUTOMATIC WASHERS • COMMERCIAL REFRIGERATION AND AIR CONDITIONING EQUIPMENT

168 The Architectural FORUM October 1946
Early this Spring, Kencork entered an entirely new world—the big field of America's homes. And we're proud to say she's a popular child.

Designers have taken Kencork to their hearts—as the ideal flooring for bedrooms, baths and nurseries.

Home owners—both immediate and prospective—are impressed by Kencork's ability to cushion footsteps, shrug off moisture, and act as a natural insulator.

Department stores have cooperated generously with display rooms, impressive literature and enthusiastic selling.

And needless to say, we're doing our part. For we're giving Kencork an impressive send-off, through full-page, full color ads appearing consistently in House & Garden and American Home (and receiving thousands of inquiries from every ad).

You, too, have probably felt this interest—through inquiries from your clients. And if you know Kencork's 40 year record, as the preferred flooring for museums, churches and executive offices, you'll speak with authority. Right now, we'd like to bring you up to date as to Kencork's post-war consumer plans, and send out our latest illustrated booklet, telling the facts on this original cork flooring. We'll hope you'll take the time to send in for your copy.

DAVID E. KENNEDY, INC., 69 SECOND AVENUE, BROOKLYN 15, N. Y.
A 22-YEAR SUCCESS STORY IS BEHIND THIS SLOGAN!

"so they MASTIPAVED the floor!"

There's a 22 year success story behind every yard of PABCO MASTIPAVE you lay. There are millions of square yards of installations that prove that Mastipave is the Number 1 Floor for Institutions!

MASTIPAVE is the rugged low-cost floor.

MASTIPAVE is the easy-to-clean floor.

MASTIPAVE is the water-rot-and vermin-resistant floor.

MASTIPAVE is the warm, quiet, resilient floor.

MASTIPAVE is the floor that is readily applied over almost every type of floor.

Write Dept. M4066, nearest Pabco office below.

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MASTIPAVE

The Low Cost, Long Life FLOOR COVERING

THE PARAFFINE COMPANIES-INC.
NEW YORK 16 - CHICAGO 34 - SAN FRANCISCO 19

Makers, also, of Pabco Linoleums, Grip-Dek and SanI-Grip Floor Coverings; Pabco Paint, Roofing and Building Materials

convenience and their own taxes. Newspaper reporters understand these facts, but are not likely to interpret properly the important relationships between them and planning without help from someone who understands both planning and news. Projects, procedures and results must be explained to the public promptly, straightforwardly, and in concise and simple language. They must be shown exactly how the execution of a sound master plan saves money, reduces taxes, makes home neighborhoods more livable...."

Concerning actual planning technique, the chapter on the general application of planning objectives to urban development is as lucid and likely as any well-advanced specific job. Rightly, outstanding examples of European planning have been included as an addendum. Though decay and inefficiency of urban areas may not be a characteristic exclusive to the U. S., the authors make it clear that this in no way lessens our responsibility. As they put it: "Let no man say these problems are insurmountable. Certainly no American doubts that the war-devastated cities of Russia, Germany and other European countries will be rebuilt. So let's not sell America short. We have the opportunity and we have the ability to do a bigger and better job of rebuilding cities than any other country in the world. We also have a national responsibility to do so. Let's say we can, and do it, before the problem gets further out of hand. Let's make a worthy start by beginning now to plan comprehensively and earnestly for full employment.... And let's do it, not merely to provide employment, but rather to convert our urban areas, where more than half our people reside, into efficient, economical, safe and pleasant places in which we and future generations will be proud to live." And, for once, no reference is made to the atom bomb. M.S.
Here is the new Sylvania CP-150 adjustable incandescent spotlight. This powerful unit will find wide use in stores, theatres, entrances, window displays—for focusing attention where it is wanted. CP-150 can also be joined with fluorescent fixtures to form a combination lighting unit.

The CP-150 spotlight is shown joined with two Sylvania CL-440 fluorescent fixtures—all three being members of the same "design family." Provides accent lighting plus general illumination. (The CP-150 can also be turned to its narrow side and centered between fixtures of two 40-watt lamps each.)

This is the Sylvania CG-440—glass shielded version of the CL-440 fixture (above right). Containing four 40-watt fluorescent lamps, this fixture has the beauty and modern appearance required by the most exclusive shops and offices.

These new fixtures are examples of Sylvania's pioneering in new and improved lighting equipment. Architects will find these Sylvania Electric units readily adaptable to the most exacting design specifications.
Homeowners enjoy this “new quality of living” every day in the year.

Entire family gets 100% “use value” from Servel All-Year Gas Air Conditioning

You can specify Servel All-Year Gas Air Conditioning for your new homes in full confidence that your clients will receive maximum value from their investment in it. For, unlike many features in the modern home which are used only intermittently . . . extra bathroom, guest room, laundry . . . every member of the family enjoys Servel’s “new quality of living” every day in the year.

In summer the Servel unit provides cleared, refreshingly cooled, delightfully dehumidified air. In winter it circulates clean, draft-free, properly humidified heat. Through every season, the owner can select just the climate he wants by simply touching the central Selectrol.

As proof of the high investment value of All-Year Gas Air Conditioning, mortgage officers all over the country have indicated willingness to extend longer, more favorable terms on homes equipped with it. They feel that “new quality of living” it provides will keep the modern longer, thus maintaining their residences on a higher plane for a longer period of time.

Get full details now from your local Gaspany on all the advantages Servel All-Year Conditioning offers your clients. Or write to Servel, Inc., 2610 Morton Ave., Evansville.
"Cape Cod—'46 Model," one of a series in Good Housekeeping’s "Homes America Wants."
Royal Barry Wills, Boston, Architect.

quality of living” the year round

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

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 four years. The equipment is tried, . . . and approved by users everywhere.
When materials are available, there will be trim, enclosing jackets to further add to the eye-appeal of Kewanee Type "R" series.

Appearance Is Important . . . .
But Performance Counts Most

Kewanee

TYPE "R" STEEL BOILER

For Heating Homes and Small Buildings
with Oil, Gas or Coal (Hand or Stoker Fired)

Even without its enclosing jacket, each type "R" is smart and business-like in appearance. But of greater importance is the extra years of service provided by sturdy steel construction... and its ability to provide heat at minimum cost.

The flame-cut cross section of this baby size Kewanee shows the features which insure getting the most heat from fuel.

Big, high fireboxes provide that extra room essential to complete combustion. The long travel of gases through the two-pass tubes equipped with spinner blades keeps the usable heat in the boiler until all of it is transferred to the water. Extra large steam space means that plenty of steam is always available, even on sub-zero days when the boiler is pushed.

Sizes to heat 275 to 2924 sq. ft., steam.
Round or Square Models for every fuel.

Kewanee Boiler Corporation
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Branches in 60 Cities—Eastern District Office: 40 West 42nd Street, New York City 18
Division of American Radiator & Standard Sanitary Corporation

75 YEARS BOILERMakers

The Architectural FORUM October 1946
GLUE ADDS PERMANENCE . . .
to the economies of BUILT-IN FURNITURE

Built-in furniture—cabinets, bookcases, counters, dining nooks and even bunk beds—is part of the planned economy of today's prefabricated houses.

Part of the house, the cost of these "built-in" features might be included in the long-term real estate mortgage. Thus, the buyer would be saved the large cash outlay which would be necessary in buying movable pieces of furniture of these types.

Since these "built-in" features are integral parts of the house, they should be built with the same permanence as the house proper—with Cascophen, the new completely durable, resorcinol-resin glue.

Ideal for both structural and non-structural work in house building, Cascophen has been laboratory- and field-tested to resist moist or dry heat, mold, fungus or solvents—forms a bond so durable that it cannot be destroyed without first destroying the wood fibre.

Cascophen glues are available either room-temperature- or intermediate (warm)-temperature-setting, are easy to use, require only moderate clamping pressure and have a long storage life.

Get a free working sample and complete information. Fill in the coupon below and mail it today.
FREE SERVICE FOR DISCHARGED VETERANS

To aid discharged veterans secure professional and executive employment in the building industry, THE FORUM will publish without charge classified ads giving applicants’ qualifications, experience, in occupation and location. Ads may be run with name and address or with box number. (If answering ads please include postage for forwarding—5c per letter.)

Employers seeking personnel are urged to make their known requirements. Address: G. I. Jobs

THE ARCHITECTURAL FORUM
350 Fifth Avenue, New York 1, N. Y.

Positions Wanted


DESIGNER—Experience to locate in Fla. or So. Calif., 8 yrs. designing sales, layouts, furniture displays, 2 yrs. small homes, midwest and Calif. Handling customer contacts, prospecting, working drawings and supervision. 14 yrs. old. Likes to offer retail chain, manufacturer, design firm, or 7 Loren Carp, P. O. Box 308, Caron, Calif.


ARCHITECT—Married, one child. Practicing architecture, Reg. No. 1, and Fla. NCARB reg., pending, 15 yrs. in profession, 12 yrs. in own practice, primarily in the metro area. Vast experience in residential, commercial and institutional bldgs., field, work procurement, administration and industrial design. Desires: work with Fla. firm on substantial drawing not basis applied against share in business produces. Grad. Univ. of Michigan School of Arts Design. Box E-270.

STORE DESIGNER—10 yrs. exper. before induction; 9 mos. exper. since discharge. Former clerk, former draftsman, formerly in Ohio State and Texas Univ.; thorough study of European functional design which delivered postwar economic way of living without loss of drama in presentation. Considered a top display engineer throughout southern states. Married, 3 children, age 34, interested in perm. pos. with firm specializing in store design and execution, or dept. store executive extraordinaire bldg. program. Box E-277.

ARCHITECTURAL AND MECHANICAL DRAFTSMAN—Profile set, 25, married. Experienced in arch. and mech. drafting, and model making. Can do pencil rendering and perspective. Now employed as instructor in arch. and mech. drafting. Desires position which can use an ambitious and studious young man. Will consider full or part-time in or around N. Y. C. Box E-278.

MANUFACTURERS’ REPRESENTATIVES—We are a group of obtaining agencies for bldg. trade materials for distribution in British Columbia. First class salesmen referred with thorough professional knowl edge of bldg. industry in this part of Canada. Box E-299.

ARCHITECTURAL DRAFTSMAN, 28, released as Lt. Comdr. USNR (Constr. Corp.). Graduated from Univ. of Illinois with B.S. Architectural Engineering. 4 yrs. naval construction experience. 25 yrs. experience as architect and drafter. Desires position as architectural draftsman in Chicago, Ill. Box 100, Cando Sutters St., 114 E. 24th St., Chicago Heights, III.

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Why does G-E air conditioning create good-will for the architect?

Simply because G-E engineers have worried out the wrinkles in air conditioning that used to mean drafty, dusty, stuffy installations. The G-E men have come up with Better Air Conditioning that performs all five essential air conditioning functions: Cooling*, Dehumidification*, Circulation, Ventilation, Filtration.

G-E heating equipment, too, is a real reputation builder. G-E gas or oil plants give quick, economical heat for homes or small commercial buildings . . . for steam, hot water, vapor, or conditioned warm air systems.

Check Sweets Catalog for specifications . . . or call your G-E distributor. General Electric Company, Air Conditioning Department, Section 61310, Bloomfield, N. J.

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AUTOMATICALLY FIRED, FORCED CIRCULATING

Hot Water Heat!

THE THRUSH Flow Control Valve has proved its dependability and fine quality through years of service. Now it is better than ever, with the convenient Manual Control as an added feature. This, plus the exclusive, patented vent below the seat which eliminates leakage makes it the finest flow control valve on the market, bar none . . . and yet it is lower in cost than competitive valves! It is designed for operation with Thrush Water Circulator to control the circulation and prevent wasteful overheating in automatic, forced circulating hot water heating systems. It can't stick. Manual control does not interfere with normal operation. Neat in appearance, easy to install, takes the place of a tee. Ask your Wholesaler or write for more information. Address Dept.H-10

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Summer, Winter DOMESTIC Hot Water

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Summer, Winter DOMESTIC Hot Water
ON the drafting board, Milcor Metal Lath gives you unlimited freedom to develop structural forms and shapes.

On the job site, Milcor Metal Lath provides maximum rigidity with light weight. The whole wall and ceiling is held together in one fire-resistant monolithic slab, free from cracking, warping, and shrinking tendencies.

Although not plentiful today, metal lath is more easily obtained than substitutes which do not have the fire-safety, permanency, or vermin-resistance of steel . . . and which have never equaled metal lath as a satisfactory plaster base.

Steel-reinforced plaster faithfully expresses your conception of form and color tone. The entire plastered surface remains at practically the same temperature, thus avoiding condensation and resultant plaster blemishes such as lath streaks. The plaster stays new-looking longer, a credit to your reputation.

Consult the Milcor catalog in Sweet's. Or write today for the Milcor Manual.
When an architect builds his own home...

HE PUTS IN A MODERN LAUNDRY!

When Harold Spitznagel of Sioux Falls, South Dakota, prominent American architect, planned a new home tailored precisely to the living requirements of his own family, he was careful to include a laundry room for his BENDIX automatic washer.

And he did it deftly, economically, as you can see from the floor plans below.

You can see how cleverly he utilized the space—every square foot is working. And how convenient is the arrangement! The service sections are grouped—compact, yet uncluttered: garage, toolroom, heating room, kitchen, and laundry form a unit, departmentalized for highest household efficiency.

Tuned to the tempo of modern living here is a home that "works." And The BENDIX is an important part of its working efficiency.

MODERN WOMEN DEMAND A MODERN LAUNDRY ROOM

You know that more women are demanding a separate laundry room in their new homes. The BENDIX automatic Washer is partially responsible for that trend. For women know that with BENDIX the old washday worries disappear. It means completely work-free, worry-free washing. The housewife puts in the clothes, sets the dial, adds soap—and leaves. She can go about other duties while the BENDIX washes, rinses, damp-dries, then drains itself and shuts itself off. No wet hands, no slopped floors, no wrestling with a heavy machine. And the beautiful, compact (4 sq. ft.) BENDIX easily "goes with" the most modern laundry.

It's easy to plan a home that gives all that to the modern woman. Write for our booklet of suggestions, pictures and plans. And the house with a BENDIX is easier to sell, too. In most States the machine can be included with the price of the house under FHA.

BENDIX automatic Home Laundry

BENDIX HOME APPLIANCES, INC., SOUTH BEND, IND.
seven-foot high continuous panels of Insulux Glass Block usher in daylight to all three floors of Miles Laboratories, Elkhart, Ind. Important to this manufacturer of proprietary medicines is the diffusion of daylight through wide working areas, spotless appearance, and high insulating value. To keep clean, all that is required is an occasional fast and inexpensive washing. Clear windows are set in some of the Insulux panels for vision out and ventilation.

OWENS-ILLINOIS

INSULUX

GLASS BLOCK

Glass harness for daylight

Daylight—in harness—opens a host of architectural opportunities, and this control is easily realized with Insulux Glass Block.

Natural daylight can be diffused evenly through a horizontal plane or the direction of light rays can be changed. Distracting views are eliminated, privacy assured. Infiltration of outside noise is materially reduced.

Insulux helps maintain controlled conditions of cleanliness and sanitation—stops air leaks around ill-fitting openings. Also, the insulating properties of Insulux give lower cost air conditioning and heating operations. Condensation of the room side of panels is much less than on a single glazing.

These qualities merit careful consideration in any structure where natural daylight under close control will give better working conditions or improve livability.

Technical data, specifications and installation details will be found in the "Glass" section of Sweet's Architectural Catalog, or write Dept. C-22, Owens-Illinois Glass Company, Insulux Products Division, Toledo 1, Ohio.
VISITORS to the National Life and Accident Insurance Company Building, at Nashville, Tenn., are impressed with the restrained beauty of its interiors. Tennessee Marble in a beautiful gray shade is used in the corridor walls, with pink marble being used for door trim and border for the green stone floor. Other floors are mastic tile. Ceilings are accoustical tile.

The executive offices are paneled in different woods, including knotty white pine, walnut and butternut. Modern, decorative and utilitarian are the illuminating panels which provide abundant light throughout the building. On the same plane as the ceiling level, this illumination forms a pleasing pattern which accentuates the strong, simple lines of the interiors.

Included in the Pratt & Lambert products used originally and for maintenance, are: Lyt-all, the Universal Wall Coating, Interior Trim Primer, "61" Enamel Undercoating, "61" Enamel Eggshell, "38" Preservative Varnish, P&L Stains, and Oil Colors. Appropriate decoration thus goes hand-in-hand with economical maintenance—a important factor in the efficient operation of a large building.

On request, the Pratt & Lambert Architectural Service Department will provide complete color plans and sound painting specifications for projects of all types.
Egg-Crate Ceilings in U.N. Assembly Auditoriums provide high level illumination, eliminate uncomfortable variations in brightness.

Designed to throw plenty of light on the Councils of the United Nations at their new home at Lake Success, L.I., egg-crater ceilings in the two 6,500 sq. ft. auditoriums are the largest ever attempted. Providing a continuous blanket of uniform soft white light over the entire ceiling area and a general illumination of 55 footcandles, uncomfortable variations in brightness are reduced to a minimum. This general eye comfort is achieved by the combination of white ceiling and louvers, closely spaced lamps of low brightness, and design of the louver fins to cut direct viewing of the lamps.

The louvers, Walker, Foley & Smith, architects responsible for the conversion of the former industrial plant into a suitable setting for the U.N. meetings, designed the installation assisted by G.E. engineers.

Two lighting panels, supplied with 208/120 v., 3 phase, 4 wire, 60 cycle, AC, from 500 amp. busways located in monitors above the chambers, serve each ceiling. Contactors operated by remote control switches and wired to alternate rows of the continuous installation, half level illumination is possible when desired. A total of 36 circuits carry the lighting load of 24,000 w., or an average of 3.7 w. per sq. ft.

As the former industrial plant utilized continuous wiring channels, a considerable saving was effected by using the existing troughs and mobile bipin sockets. Channels were rewired with instant start ballasts, equipped with blank cover plates and new 40 w., 4,500° white lamps. Because of the multiplicity of speakers and radio circuits, a G.E. interference filter was mounted in the wireway with each pair of ballasts.

Aluminum louvers, 6 in. deep with 9 in. sq. openings, are easily removable for maintenance in sections 2 ft. 6 in. wide by 5 ft. 6 in. long. Hung from runners spaced 2 ft. 6 in. o.c., lateral tie straps assure alignment.
WORLD'S LARGEST RADIANT HEATING SYSTEM is installed in A. O. Smith Corporation's Kankakee (Ill.) plant. Forty Miles of wrought iron tubing are used in the system, which covers 48 bays of manufacturing. Two of Smith's own water heaters furnish hot water to floor coils of the 48 bays of manufacturing. The heaters—which may be independently—connected respectively—are connected by a by-pass so that full capacity of heater utilized. For easy maintenance, prints have been prepared to show the exact location of every weld, header and lateral in the system.

The largest radiant heating system on record, using wrought iron tubing supplied with 180,000 gals. of water per hour, small water heaters, has been installed in the new K-W Works of the A. O. Smith Corp., Milwaukee, Wis. This system of dividing the heating equipment into 120 small systems, heating any part of the plant independently of the rest, by engineering logic, necessity and exigency of materials, is used in both grid and sinuous coils. An arrangement of thermostats, unique both as to type and operation, will control the system, and servicing can be handled easily by one man.

The plant is largely a one-story structure, 1,200 ft. by 315 ft. Each bay is 1,200 ft. by 25 ft. wide. Eighty per cent of this installation is of grid construction. As pipe suited for continuous coil construction was more readily available, the remaining floor area has a combination of grid and sinuous coils. Headers were introduced into the coil construction to reduce resistance to flow where it was too great for the size of the pumps, and to guard against future changes in arrangement and foundations. Two gas Smithway-Burkay water heaters (see B.R. 7/46) connected in a bypass serve each bay, one heater serving half the bay.

In addition to the plant proper, there are mezzanine floor office areas totaling 33,438 sq. ft. Bundy tubing in all the mezzanine floors to fit into the thin concrete floor. First-floor offices use regular grid construction but in the auxiliary wrought iron surface in the ceiling at the exposures. Copper tubing is used in the ceiling of second offices. In addition, the wrought iron panels near the walls warm portions of the floor under the windows.

WHEN COMPLETE, this new factory at Kankakee, Ill. will turn out 250,000 domestic storage heaters per year. Designed for single-story, straight line production, the plant covers an area 315 ft. wide, 1,200 ft. long. A two-story administration and laboratory unit occupies the southeast corner.
and steel tubing used in grid and coil installations.

WROUGHT IRON GRID—consisting of 2 in. inside diameter headers, 20 ft. long, and 1¼ in. laterals approximately 140 ft. long—is used in this portion of the manufacturing area. Each bay is served by two heaters mounted in clerestory.

COMBINATION of grid and continuous coil construction in 2 in. I.D. wrought iron pipe yields a concentration of heating surfaces along outside wall. Assembly is fabricated in place.

STEEL TUBING, ¾ in. I.D., is used in welded loops 100 ft. long in the mezzanine level. Coil is laid directly on steel decking and imbedded in concrete. Overall thickness of floor is 3 in.

CIREULAR LOBBY in office building has a wrought iron grid of special design to fit space requirements. Note that grid extends beyond building line into sidewalk in front of entrance.

SYNTHETIC VEHICLE FOR PAINT helps solve current shortages.

Pliolite S-5, a new vehicle for paints, is helping to solve the crucial shortage in this commodity. Developed by the Goodyear Research Laboratory from readily available materials, it is a thermoplastic, non-oxidizing, synthetic copolymer resin. It is said to be superior to natural rubber Pliolite used in paint manufacture before the war, and is finding use in acid- and alkali-resistant coatings, concrete floor enamels and architectural finishes of all types. Non-toxic, highly resistant to moisture, acids, alkalis and other corrosive chemicals, it has many properties which make it advantageous for fast-drying protective coatings. It possesses excellent color and clarity, has no objectionable odor and is readily soluble in aromatic hydrocarbon. In addition, solutions will tolerate considerable dilution with cheap petroleum thinners without separation or precipitation of pigments. Low solvent retention permits quick evaporation of the solvent, thus bringing about fast drying without an oxidizing period. Resistant to alcohol, vegetable, animal and mineral oils and greases, abrasion and scrubbing, it also possesses good aging characteristics and outstanding toughness and adhesion. It has good thermal stability and withstands mixing on two-roll mills and baking. The material is furnished in two forms by the Goodyear Tire and Rubber Co.—a clear dry resin and a dry resin in which pigments have been dispersed.

LEAN-TO UTILITY ROOM saves floor space, facilitates furnace tending.

Where to put the furnace and coal supply in a basementless house has been neatly solved by this lean-to, frost-line utility room, designed by Randolph Evans for the Anthracite Industries. The solution not only saves valuable floor space but makes the job of furnace tending relatively easy. The heater room is placed outside the main body of the house on the chimney wall, and is only a few feet below grade. Readily accessible from the kitchen and an exterior areaway, its design permits the furnace to utilize the fireplace flue and warm the crawl space beneath the house. A compact coalbin with chute, and an ash pit built in under the furnace are included. A door direct from the ash pit chamber to the areaway provides for easy ash removal.

ARCHITECT EVANS' version of convenient coal-fired furnace room for basementless house.
IMPROVED AIR DISTRIBUTION is boon to Industrial Air Conditioning.

Given impetus by the wartime boom in plant construction, air conditioning has proved to be one means of increasing industrial efficiency. Controlled conditions insuring even temperature and humidity, vital to certain industrial processes, are helping in the manufacture of superior products. Comfortable, draftless working conditions for personnel result in high product quality. An important factor in the success of many such installations is the use of the Anemostat for proper air distribution. Customarily used in commercial air-conditioning installations, this air diffuser has been successfully engineered into many industrial plants. Composed of a group of metal cones, the device reduces incoming air velocity, mixes it with room air siphoned into the diffuser, and redistributes the mixed air over a predetermined area near the ceiling. All diffusion and air-mixing taking place within the device, and air turbulence being limited to its vicinity, there are no perceptible drafts in the occupancy area. Several industrial air-conditioning installations which depend upon these diffusers for their success are illustrated herewith.

BUILDING REPORTER

SECTIONAL STAIR UNIT combines tread and riser for speedy stair construction.

Fast stair construction for homes and commercial buildings is possible with the Pressed Steel Sectional Stair Unit. Combining a 9 in.-deep tread and a 7 1/2 in.-high riser in one piece of formed metal, punched and slotted for easy erection, a complete 36 in.-wide stairway can be put up in approximately 90 minutes. A lip extending above the tread has a 1 3/4 in. slotted hole through which bolts secure the lower unit to the one above. This slot permits adjustment for the height of the rise to the extent of 1 in. per unit, from 7 to 3 in. Made of 12 gauge steel, the stairs may be covered with rubber treads, carpeting or paint. Hardware and instructions for assembly are included in each of 13 units for the stairs and one for the top. Units may be used for exterior stairs in addition to the usual interior applications, or for surfacing or molding cement stairways. For a 72 in.-wide stairway, two units may be used together.

Manufacturer: HomeOla, Inc., 9 S. Clinton St., Chicago, Ill.

ALL-PURPOSE SEALING COMPOUND for household and industrial uses.

Cauxeal is a plastic, all-purpose seal which can be worked and shaped with ease. Water-tight, fume-proof, acid-resistant and not adversely affected by hot or cold water or weather, it bonds firmly to practically any thoroughly clean material, expanding and contracting with the surface to which it adheres. Cauxeal seals water, fume, air or electrical conduit or ducts of metal, tile or fibre, soil pipe or glass block. It may be used for glazing or as a caulking compound, for setting plumbing fixtures, for expansion or other structural joints, for laying or pointing tile, for cracks in floors under wet or damp conditions, and for miscellaneous industrial uses. Dark brown in color, it retains its plasticity indefinitely and contains no asphalt or tars. It is applicable with hand or knife and comes ready for use in 1 lb. and 5 lb. containers priced at $0.40 and $1.75 respectively.

Manufacturer: X-Pando Corp., 43-15 36th St., Long Island City 1, N. Y.

(Continued on page 188)
Convectors had to be ordered specially for each job until Trane engineers decided to do something about it. There were dozens of cabinet models, and scores of heights, widths, and lengths. Each type of heating system required a different heating element.

To make the convector easy to buy, Trane engineers first designed a single cabinet that could be installed either free standing or recessed. They found that a smaller number of heights, widths, and depths would satisfy nearly every requirement. Then they designed a universal element that would work equally well with every type of hot water or modern steam system. Finally they devised a system of mass production.

Now Trane can build its standardized Type A Convecto-radiator as fast as materials can be obtained. Distributors can easily stock the lightweight packaged units, so that contractors can readily buy them over the counter.

The process of making a Convecto-radiator easy to buy is another example of the ingenuity of Trane Engineers, who carry out a constant program of research in the development and refinement of Trane Products and Systems.

All Trane Products are designed and built together for service together. The architect and engineer will find that there is a complete Trane System for almost every conceivable application in heating, cooling, and air conditioning.

More than 200 Trane field engineers in principal cities all over the country cooperate with architects, engineers, and contractors in the application of Trane Weather Magic.
WHEREVER PEOPLE GATHER . . . plan to use this Beautiful Background Material

Few settings need a more carefully chosen background than the altar of a church. The material itself must be beautiful . . . yet focus attention on the objects it displays. It must harmonize perfectly with the atmosphere and appointments of its surroundings.

ASBESTOS PLASTER provides fire protection, thermal insulation and noise reduction.

Clapseal is an insulating, fire protecting and noise reducing material which has the ability to bond directly to any non-oily surface. Delivered to the job ready mixed and applied in the same way as ordinary plaster, one application provides a combination of fire protection, thermal insulation and acoustic treatment. Successful applications have been made on metal, wood, structural building boards, masonry, glass and all types of conventional lath. Clapseal is very lightweight as compared with regular fireproof materials, will not sag or pull away from the surface to which it is applied and will not crack. It finishes with a hard, gray surface similar in appearance to smooth cement, and may be further finished, if desired, by direct application of hard plaster, porous paper or water, oil, asphalt or rubber-based paints. Cost of Clapseal is said to be approximately 10 per cent more than ordinary plaster, but this differential, according to the manufacturer, is more than saved by the reduction in insulation requirements when Clapseal is used.


DOUBBLE HUNG WINDOW opens inward to provide maximum safety in cleaning.

Tilting inward, both sashes of the Mauro Safety Window can be easily cleaned, painted or glazed from the inside without removing screens or storm windows. They may be regulated to any desired angle for draft-free, rainproof ventilation, and in hot weather may be fully opened to a horizontal position level with the sill. Replacing the ordinary sash lock, springs, weights or pulleys is a patented device which provides smooth, noiseless movement under all weather conditions. It also constitutes a burglar-proof lock which cannot be opened from the outside even when the window is partly open. Factory fitted and toxic treated, Mauro Safety Windows are furnished in any size and style, glazed and weatherstripped. They can be installed in new or old buildings without changing present frame and trim. According to the manufacturer, installed cost is comparable to that of ordinary double-hung windows.

Manufacturer: Safety Window Corp., 215 Montague St., Brooklyn, N. Y.

UNIVERSAL CASEMENT WINDOW OPERATOR for commercial and residential construction.

The Parlyn Casement Window Operator, suitable for use wherever casement windows are installed, provides easy operation, safety and security. Truly a universal operator, the same model may be used on left- or right-hand, large or small windows without adjustment or special equipment. It requires only 1 ½ in. between screen and sash, and operating handle can be quickly adjusted to any screen depth. According to the manufacturer, the unit is virtually burglar-proof by its special Zamak alloy construction and can be installed faster and easier than old style operators. A roller bearing-borne arm and precision operating gears assure easy operation, and a turret top allows the arm to swing in a full circle in either direction. Thus, the operator opens windows over 90°.

Manufacturer: Parlyn Ltd., 707 S. Broadway, Los Angeles 14, Calif.

ADJUSTABLE FLY SCREEN kills flies and flying insects.

Suitable for places where food is produced and handled, such as hospital, hotel and restaurant kitchens, for factories, dairies or country homes, this electric fly screen kills flies instantly. It operates continuously and automatically at a cost of approximately 10 cents a month, and comes in both door and window units. Screen consists of horizontal rods, 3/32 in. in diameter spaced ¾ in. apart, and two sets of parallel struts supported by a metal frame. Struts are energized by a transformer operating (Continued on page 190)
LOOK AT ALL THE ADVANTAGES of Saran screen, but first consider these: It gives you the longest service life at the lowest cost.

This Dow plastic has created screen that stands up to time, weather and hard use. Saran screen is many times stronger than ordinary screen. It takes more abuse. It’s resilient. It won’t sag, or become disfigured with dents and bulges.

Saran screen practically eliminates maintenance. It’s easily cleaned and it requires no painting. It saves the cost, too, of frequent painting of window sills and siding. It can’t rust or corrode and thus never stains or discolors.

Happy home owners attest the long-lasting value of Saran screen. Specify it—and cut costs for years to come!

cut costs for years

WITH SCREEN FROM SARAN

PLAN NOW WITH THESE DOW PLASTICS

Saran for colorful rustproof screen; plumbing parts and equipment; name plates; wire coating; paint brush handles. Styron for brilliant lighting fixtures; escutcheons; decorative objects and trim; insulators; food-handling equipment. Ethocel for modern window blinds; extruded shapes for kitchen trim; rods, tubes and bars. Properties of these Dow plastics make them adaptable to other architectural uses under development.

PLASTICS DIVISION
THE DOW CHEMICAL COMPANY • MIDLAND, MICHIGAN
New York • Boston • Philadelphia • Washington • Cleveland • Detroit • Chicago • St. Louis • Houston
San Francisco • Los Angeles • Seattle
MORE THAN 5 OUT OF EVERY 10 FAMILIES PLANNING TO BUILD WANT SEPARATE SHOWERS

Of 11,428 families with building plans now under way well over half will have separate showers (not just a shower over the tub) in their new homes.

This answer was given in a recent survey made by Better Homes & Gardens. Names for the survey were supplied by F. W. Dodge Corporation. In the $5,000 price group 45% said their plans include a separate shower. As the home price increased the percentage rose—to 65% in the $15,000 class.

These figures check with other carefully made surveys. They all reflect the rapidly growing demand for the full enjoyment and convenience of shower bathing which only the separate shower affords.

The quality of Weisway Cabinet Showers has been a big factor in winning this acceptance of Cabinet Showers as standard bath equipment.

SPECIFY

Weisway

CABINET SHOWERS

Product of the pioneer manufacturer in this field.

Quality-proved, service-tested through years of actual use.

Vitreous porcelain recepto-

tor, with exclusive “foot-
grip, no-slip floor.”

Precision built, leakproof, easy to install.

Models for homes in every price class.

Write now for detailed information, without obligation to you.

HENRY WEIS MFG. CO., INC., 1002 Oak St., Elkhart, Indiana

ADJUSTABLE HOOD SHADES attached to outlet box-covers.

Especially designed for spotlighting store interiors, this line of adjustable lighting fixtures is available in a choice of various arm lengths from a flush mounting on 33/4 in. to 4 in. outlet box-covers to a 36 in. pipe attached to the outlet box-cover. Clusters of 2, 3 and 4 shades attached to a single outlet are also available. Each fixture incorporates the unique and adjustable “Swivelier” socket, which will not work loose regardless of vibration or number of adjustments. Hold in place by means of special inside spring construction, it is universally adjustable to any position, 90° vertical adjustment and 350° horizontal adjustment.

Manufacturer: Swivelier Co., 30 Irving Pl., New York 3, N. Y.

VENTILATOR for wall or ceiling mounting.

Composed of an aluminum intake grille which mounts in the kitchen and a fully-enclosed operating unit which mounts on the outside wall, Kitchen-Aire Six can be used for wall or ceiling mounting. It requires only a 6 in. opening through the wall, and for other than side wall installation uses standard sections of 6 in. pipe between the joists. Runs up to 30 ft. have proved successful. The blade and motor, fully enclosed in an aluminum housing, incorporate a unique design whereby grease-laden air is not drawn over the motor but passes through an unrestricted opening and is discharged. Thus, cleaning of motor and blades, necessary with conventional ventilators, is eliminated and fire hazards reduced. Since it is located outside the building, operating noises are minimized.

Other features include a weather-resistant motor cover and deflector which effectively resists wind, rain and snow, and a patented automatic back-draft damper which safeguards against drafts and excessive heat loss. Electrically operated and controlled from a wall switch, the Kitchen-Aire may be used in kitchens, bath and recreation rooms, in new or existing structures. A larger model with greatly increased capacity is suitable for commercial use in restaurant canopies or other applications handling smoke, moisture or contaminants normally injurious to motors mounted in the air stream.

Manufacturer: Stewart Manufacturing Co., 3209 E. Washington St., Indianapolis, Ind.

1947 UNIT HEATER LINE incorporates design changes.

Featuring three types of units with a total of 47 basic capacities, the 1947 Modine line of propeller unit heaters is designed to harmonize with modern industrial and commercial interiors. Incorporating improvements such as the integral, all-brazed copper condenser, copper tubes and headers are brazed into rugged, pressure-resisting units. Copper fins are mechanically and metallically bonded to tubes, and bends in each tube absorb expansion strains. Casings are aco-

(Continued on page 192)

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To compare the durability of two mortars, make a cylinder or block of each, let them "cure" for a month or so, then freeze and thaw them forty or fifty times, with a little water in the pan (the freezing unit of your electric refrigerator will do). Try this with Brixment mortar!

—AND DURABILITY MEANS

PERMANENT STRENGTH AND BEAUTY

For permanent strength and beauty, mortar must be durable—must be able to withstand the alternate freezing and thawing to which it is subjected many times each winter.

Brixment mortar is more durable. This greater durability is due partly to the strength and soundness of Brixment mortar, and partly to the fact that Brixment is waterproofed during manufacture. This waterproofing helps prevent the mortar from becoming saturated—therefore protects it from the destructive action of freezing and thawing.

Walls built with Brixment mortar therefore retain their original strength and appearance. . . . Even in parapet walls and chimneys, where exposure is particularly severe, Brixment mortar will almost never require repointing.

LOUISVILLE CEMENT CO., Incorporated, LOUISVILLE 2, KENTUCKY

CEMENT MANUFACTURERS SINCE 1830
GIVE YOUR CLIENTS
100% PROTECTION

Specify

Cabot's Clear
Brick Waterproofing

A natural water-repellent that penetrates deep into the pores of brick, sandstone, and other dark masonry,
above-grade...SEALS AGAINST MOISTURE.

PREVENTS
ozone formation caused by freezing and thawing of moisture in walls.

PREVENTS
dampness and other unsightly stains.

PREVENTS
dangerous weight increase due to water absorbed in walls.

Insulating qualities are improved because pores in masonry are sealed. Interior plaster, wall paper, paint, are preserved because dampness is shut out.
The results are permanent! Does not deteriorate with age.

Write TODAY for catalogue with complete information and illustrations. Samuel Cabot, Inc., 1274 Oliver Building.
Boston 9, Mass.

Foot Candles Talk!

with

COLOVOLT
Cold Cathode—Low Voltage Lighting

and here's what they say:

"Lower maintenance cost—longer maintenance of a given foot-candle level—greater dependability because of guarantee (One year of light guaranteed, except for failure due to breakage)—instantaneous starting—no flickering—continuous line lighting."

These extra advantages are available to commercial and industrial users of light when installations are made with COLOVOLT Cold Cathode, Low Voltage Fluorescent Lamps and Fixtures.

Write for illustrated material and technical data.

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GENERAL LUMINESCENT CORPORATION
622 S. FEDERAL STREET
CHICAGO 8, ILLINOIS

BUILDING REPORTER

conventional horizontal and vertical delivery units, there is the Power-Throw, a new draw-through unit which provides horizontal discharge of heated air over an extra-long range. It may be used alone or in combination with the other types of unit heaters. All three types are available in standard models as well as in models designed to provide low outlet air temperatures when used on steam pressures of 30 lbs. or more. The new line also features a wide range of heat throw patterns made possible through the use of several air distribution devices on the units.

Manufacturer: Modine Manufacturing Co., Racine, Wis.

FROZEN FOOD CABINETS for hotels, restaurants, farm use.

Two new frozen food cabinets, designed for use in hotels, hospitals, small commercial establishments and farm homes, feature quick-freezing compartments in addition to the usual storage sections. The larger unit, a 33 cu. ft. upright model with front opening doors, can store up to 1,300 lbs. of frozen food. It has the condensing unit and controls on top and a 1/2 h.p. motor to handle the refrigeration load. A warning bell rings when storage temperature rises above the recommended range and a pilot light burns continuously as long as the power supply is not broken. Size of the unit is approximately 6 ft. high, 5 ft. wide and 34 in. deep. The smaller model with a 16 1/2 cu. ft. capacity holds up to 600 lbs. Measuring approximately 6 ft. long, 3 ft. high and 29 in. deep, it has a 1/3 hp. condensing unit, two extra large access lids for entrance, and movable partitions in the storage compartment for convenience in stacking packages. Both units utilize Freon-12 as the refrigerant, are finished in baked enamel on bonderized steel, and have aluminum interiors for serviceability.

Manufacturer: York Corp., York, Pa. (Continued on page 196)
The purpose of Benjamin Electric Manufacturing Company's new $100,000 Laboratory is “to contribute to the advancement of the science and art of illumination.” The building embodies many new and unique advancements in construction, equipment and design. The keynote of the building itself—and of the work which is to be performed there—properly may be said to be “The Proper Equipment... CORRECTLY APPLIED.” And that, too, is the keynote of Johnson Systems of automatic temperature control.

In this interesting building, Johnson Control for Radiant Heating varies the temperature of the water supplied to the heating surfaces according to the outdoor temperature. This assures a change in the heat input to the radiant surfaces immediately upon a change in weather conditions. Irritating “thermal lag” is overcome. ... For the Photometric Laboratory, Johnson Control of the central plant air conditioning system is extremely important because of the facts that the area is windowless and devoted to precise instrument work. Provision is made for the automatic regulation of future cooling coils.

The hook-up diagrams for the guidance of engineer, installation mechanic and operator—reproduced above—are typical of Johnson-engineered installations. Ask us to help solve your next temperature control problem. JOHNSON SERVICE COMPANY, Milwaukee 2, Wisconsin. Direct Branch Offices in Principal Cities.
Afterglow of Mr. Edison

In the bright blaze of Mr. Edison's incandescent lamp, the romantic Nineties might have lost their bloom. But far-sighted families heard about revolutionary new lighting fixtures and quickly subdued the 16-candlepower glare.

They bought the first bulbs with frosted tips.

They replaced pink silk shades with huge reflector lamps. They defied convention and hung center lights upside down.

Just as enterprising families of the Nineties advanced the progress of lighting, alert readers of House & Garden are setting new trends in lighting...and new trends in living...today. Because they are the most forward-looking families of the day, their influence is felt throughout the entire housing field.

House & Garden

sells America's most influential families
The VIZ-AID
For ceiling or suspension mounting—unit or continuous installation. Designed for two 40-watt lamps. U. S. Patent Nos. D-138990, D-143641—others pending.

Day-Brite fluorescent fixtures are optically engineered to make seeing comfortable...In the VIZ-AID, patented V-shaped ALZAK louvres evenly distribute glareless light.

Day-Brite Lighting, Inc., 5471 Bulwer Avenue, St. Louis 7, Mo.
Nationally distributed through leading electrical supply houses.
In Canada: address all inquiries to Amalgamated Electric Corp., Ltd., Toronto 6 Ont.
GAS RANGE incorporates new cooking features.

Designed to fit flush with the wall, cabinets and working surfaces at each side, this fully automatic Western-Holly gas range will be available in 1947 for California distribution only. It incorporates a new heating element, Tempa-plate, which, according to the manufacturer, provides even heat distribution and outstanding efficiency. The four top burners are arranged in a line at the rear of the range for safety and to facilitate the removal of cooking vapors by an automatic ventilator concealed in the cabinet above the range. Two ovens, a large baking oven and a special meat oven for broiling and barbecuing, are other features.

Manufacturer: Western Stove Co., Culver City, Calif.

WORKING MODELS in metal, wood and plastic.

This company will supply designers, engineers, architects, etc., with all types of working or display models of machinery, industrial plants, architectural layout and products. Using metal, wood and plastics, it is equipped to work from blueprints to the closest tolerance in any scale. Model of a screw-cutting metal lathe scaled 1 1/2 in. to the foot is illustrated.

Manufacturer: Stark Industrial Models, 95 Jane St., New York, N. Y.

LIQUIDOMETER

Tank Gauges

100% AUTOMATIC FOR GAUGING LIQUIDS OF ALL KINDS
APPROVED BY UNDERTAKERS' LABORATORIES

ARCHITECTS, ENGINEERS AND BUILDERS AGREE
A RELIABLE GAUGE IS NECESSARY WHEN MEASURING VALUABLE STORED LIQUIDS

"LIVES WORTH STORING ARE WORTH MEASURING"

THE LIQUIDOMETER CORP.

36-30 SKILLMAN AVE., LONG ISLAND CITY, N.Y.
After tube is cleaned, flux applied, and joint heated, wire solder is applied, and is drawn into joint by capillary action.

**In Radiant Heating Installations FITTINGS ARE EASILY SOLDERED TO Copper Tube**

When Chase Copper Tube is used in radiant heating installations, tight joints are easily made by a simple soldering operation. Both Chase Copper Tube and Chase Solder-type Fittings are made to close tolerances that help assure proper filling of the joint with solder.

Even these easily made joints are needed in only small numbers. Chase Copper Tube comes in lengths up to 100 feet—fewer joints needed between coils. It's easily bent to shape right on the job—no fittings needed at bends. No special tools required for bending, either.

With these and other advantages of Chase Copper Tube (note list at right) it's not surprising that we cannot always keep pace with the demand. But if you're planning radiant heating installations, the information is available for your use right now. We'll be glad to send you our radiant heating literature—simply address Dept.AF106.

**7 Reasons WHY CHASE COPPER TUBE FOR RADIANT HEATING**

1. EASY TO BEND
2. LIGHT IN WEIGHT
3. SOLDERED FITTINGS
4. SMALL DIAMETERS
5. LONG LENGTHS
6. LOW COST
7. LONG LIFE

Waterbury 91, Connecticut

Chase BRASS & COPPER CO.

This is the Chase Network—handiest way to buy brass INCORPORATED

SUBSIDIARY OF KENNEDY COPPER CORPORATION

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

197
America finds a new, easy way to save

Out of the war has come a great lesson in thrift—the success of the Payroll Savings Plan.

Under this Plan, during the war, millions of wage earners set aside billions of dollars for War Bonds through weekly pay deductions.

Under it today, millions continue to buy U.S. Savings Bonds...to put away the money for new homes, new cars, new appliances.

SUGGESTION: Why not save this new, easy way too?

SAVE THE EASY WAY... 
BUY YOUR BONDS THROUGH PAYROLL SAVINGS

Contributed by this magazine in co-operation with the Magazine Publishers of America as a public service.

TECHNICAL LITERATURE


This booklet describes various Celanese synthetics, their characteristics, mechanical and electrical properties and some of their applications in the electrical field. Lumarith films, foils, sheets and molding materials, Celanese yarns and fabrics, Fortisan and Celanese synthetics are covered, and many photographs illustrate how they serve the electrical industry.


Discussing practically every phase of electric service on the farm, this handbook makes recommendations for interior wiring of farm buildings and distribution systems between buildings. Intended to show how to plan farm wiring systems for adequacy, efficiency and ease of future expansion, it emphasizes the necessity for initial adequate capacity service. Floor plans show best locations for switches and outlets. Tables and data illustrating demands, wire sizes and voltage drop are included to aid in the selection of conductor sizes for services, feeders and circuits.


This catalog is intended to familiarize the architect's and engineer's client with Carrier air conditioning, refrigeration and unit heating equipment. It illustrates, briefly describes and gives uses of such pieces of equipment as dehumidifiers, Weathermakers, Weathermasters, refrigerating machines, condensing units, cold diffusers and unit heaters.


Crane's line of plumbing fixtures and heating equipment now available for low cost homes is fully illustrated and described in this catalog. Four newly designed bathroom groups, two newly developed kitchen cabinet sinks, and newly designed boilers for burning coal, oil or gas are featured as well as specific equipment such as corner lavatories, shower receptor baths, medicine cabinets, laundry trays, water heaters, etc.

INTERIOR DECORATION. Fundamentals of Interior Decoration, Circular Series H1.0. Small Homes Council, Mumford House, University of Illinois, Urbana, Ill. 8 pp. 8½ in. by 11 in.

The principles involved in good interior decoration—scale, form, color and arrangement of furnishings—are treated in this booklet. These elements of decorating, which govern the standards of good design, are illustrated and discussed in detail. Rules regarding color, period furnishings, harmonious woods, etc., and a list of “don'ts” are included along with a typical decorating problem.

COST REDUCTION. Visual Consultation Chart for Cost Reduction. Designers for Industry, Inc., 2915 Detroit Ave., Cleveland, Ohio. 1 pp. 22 in. by 17 in.

This quick reference chart, covering the classifications of Direct Labor, Manufacturing, Overhead, Administration, Selling and Distribution, and Materials, gives remedies for 37 problems which contribute to today's high costs. Helping industry to pick out cost items which need study, it suggests a remedy for each problem.

(Continued on page 200)
Announcing

A NEW 4-POLE THERMAL MAGNETIC TRIP MULTI-BREAKER

Trips instantly on short circuits but holds on harmless overloads

The popular MO 2-pole Multi-breaker now increased to 4-pole range
Calibrated for the new National Electrical Code, wire ratings 15, 20, 30 amperes

2-WAY PROTECTION FOR CIRCUIT WIRING
The magnetic trip functions in 1/50 to 1/100 of a second even on minor short circuits. This magnetic trip feature is combined with the time-tested thermal bi-metal element which provides time-delayed tripping on moderate overloads.

The MO4 MULTI-BREAKER is compact (5” x 7”) having 4 single poles with circuit ratings of 15, 20, 30 amperes. Either top or bottom poles can be converted into a double pole circuit by inserting a handle tie bar furnished with the device.

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FOR COMPLETE DETAILS, WRITE FOR BULLETIN 4100. ADDRESS SQUARE D COMPANY, 6060 RIVARD ST., DETROIT 11, MICHIGAN

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Advantages of Tournalayer-built concrete homes, erection method using the Tournalayer machine, and merits of this method of construction are featured in this booklet. Plans and drawings of various single-unit house designs and larger houses produced by two or more unit structures show wide possibilities of the construction system. The mobile machine which lays the house, the Tournalayer, is fully described and factors important to mass production, such as site location, concrete pouring and setting and preparation of inner forms, are discussed. Step-by-step photographs and text illustrate Tournalayer's simple operation. Terms and costs of leasing Tournalayer home-building equipment, and the history behind the Le Tourneau Monolithic Home are also included.

CLAY PIPE. Sanitation and Drainage With Clay Pipe. Clay Sewer Pipe Assoc., Inc., 17 S. High St., Columbus 15, Ohio. 4 pp., 8½ in. by 11 in.

The many uses of clay pipe products in residential construction are featured in this folder. Chimney-top production, flue linings, many types of drainage pipe, wall copings, etc., are illustrated and described. Advantages of clay pipe for sanitation and drainage are discussed.


This standard provides uniform methods for testing and reporting the physical and chemical properties of mineral wool products made of rock, slag or glass, and describes equipment required to produce standard results. Methods of testing are included for adhesive strength, compressive strength, corrosion resistance, coverage, density, fire resistance, moisture absorption, odor emission, shot content, temperature stability and thermal conductivity. An impressive list of acceptors, who have agreed to utilize the standard inssofar as practicable in their activities as producer, distributor, purchaser or testing laboratory, is included.


This slide-rule chart, presenting technical information on aluminum alloys 2S, 3S, 14S, 17S, 18S, 24S, Pureclad 24S, 25S, 32S, A51S, 52S, R353, 56S, R361, R301, R303, Clad R30, R317, greatly simplifies the selection of the desired alloy and temper for a particular application. A main horizontal slide pulls to line up with the aluminum alloy under consideration. A second slide moves vertically to line up with one of seven different product forms—sheet, plate, wire, rod-bar, shapes, tubing-pipe, forgings. Thus, by setting one slide for the alloy and the other for the product, the user has available in handy form data on mechanical properties, chemical composition, physical constants, thermal treatments and specifications. In addition, alloy and temper designations are explained and outstanding properties of each of the 18 alloys are briefly noted.

PLASTICS. Plastics Primer. The Dow Chemical Co., Midland, Mich. 16 pp., 8½ in. by 11½ in.

This booklet gives the facts about Dow plastics, their properties, fabrication and uses. It includes: an introduction to what plastics are and how they are molded; articles on the history and uses of Styron; outstanding characteristics of Ethocel and Saran; descriptions of Dow packaging materials and Dow plastics at work. Many photographs illustrate uses and advantages of the materials. (Continued on page 204)
Architects and designers will find that new G-E Circline fluorescent lamps suggest an unlimited number of ways to develop lighting that's original, and more attractive, and more useful. These smooth, compact circles of glass present a versatile lighting form possessing distinctive decorative quality—Circline is flexible and will harmonize with other light sources to create unusual and interesting light patterns. For more information on all the newer G-E lamps... Circline, Slimline, Fluorescent, Projector and Reflector lamps...
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JULES P. CHANNING, engineer, P. O. Box 572, Miami Beach, Fla.
COOPER & PERRY, architects-engineers, 204 Journal Bldg., Knoxville, Tenn.
R. E. EMMERSHALT, architect, 1810 Walker Ave., Kansas City, Kan.
JOSEP H P. FARLEY, City Investing Co., 25 Broad St., New York, N. Y.
FRANCIS A. FAULKNER, architect, 128 E. Maumee, Adrian, Mich.
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PALMER SABIN, architect, 1009 E. Green St., Pasadena 1, Calif.
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A sensational and original development of Reynolds engineering! Each clapboard sets firmly into the locking flange of the clapboard beneath, so that all nailing is completely covered. .032 gauge, 8 and 12-foot lengths, exposed clapboard surface 8". Special Starter Strip, Butt Joints and Corner Finishing Caps. Makes a beautiful Colonial sidewall when painted—or may be left unpainted. Either way, the inside aluminum surface provides efficient insulation.

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.027 gauge solid aluminum sheet, crimped in simulation of clapboard—which effect can be enhanced by painting. Supplied in 6, 8, 10 and 12-foot lengths, 24" coverage, exposed "clapboard" surface 4". Easily erected in horizontal strips, 12 feet weighing 11 lbs.

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The advertising pages of FORUM are the recognized market place for those engaged in building. A house or any building could be built, completely of products advertised in THE FORUM. When it is not possible to certify building products, it is possible to open these pages only to those manufacturers whose reputations bear merit confidence. This FORUM does.

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214 The Architectural FORUM October 1946
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It is low in cost yet has both automatic overcurrent and short circuit protection for branch circuits, in the form of a Circuit Breaker with combined thermal and magnetic characteristics...for the greatest speed in tripping.

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30 Ampere
FOR NEW CODE WIRE RATINGS
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Ford City, Pa.—Eljer Co., producers of fine vitreous china and enameled cast-iron plumbing fixtures, today announced that production has begun on the Martha Washington lavatory.

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Eljer Co. expects to achieve constant increases in deliveries of the Martha Washington during the coming months. Eljer General Offices are at Ford City, Pa.

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Remember: Adequate housing will eventually mean at least two bathrooms in every home.

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