

(A Simmons-Boardman Publication)

AMERICAN BUILDER

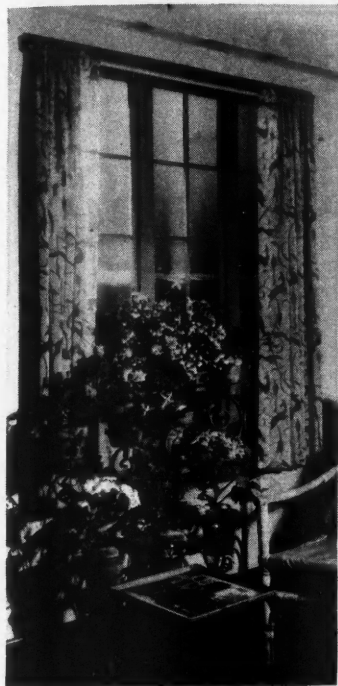
and Building Age

NAME REGISTERED U. S. PATENT OFFICE

AUGUST, 1933

55th Year

Vol. 55—No. 5



AMERICAN BUILDER and BUILDING AGE, with which are incorporated National Builder, Permanent Builder, and the Builder's Journal, is published on the first day of each month by the

AMERICAN BUILDER PUBLISHING CORPORATION

105 West Adams Street,
Chicago, Ill.

NEW YORK
30 Church Street

CLEVELAND
Terminal Tower

WASHINGTON, D. C.
17 and H Streets, N. W.

SAN FRANCISCO
58 Main Street

Samuel O. Dunn, *Chairman of Board*; Henry Lee, *President*; Bernard L. Johnson, Robert H. Morris, Delbert W. Smith, L. R. Putman, and R. E. Clement, *Vice Presidents*; Elmer T. Howson, *Secretary*; John T. De Mott, *Treasurer*.

Subscription price in the United States and Possessions, 1 year, \$2.00, 2 years, \$3.00, 3 years, \$4.00; Canada, including duty, 1 year, \$2.50, 2 years, \$4.00, 3 years, \$5.00; foreign countries, 1 year, \$4.00, 2 years, \$7.00, 3 years, \$10.00. Single copies, 25 cents each.

Member of the Associated Business Papers (A. B. P.) and of the Audit Bureau of Circulations (A. B. C.)

Editorials	13
Evolution—Perhaps Revolution—in Home Building	
July Home Building 25 Per Cent Over Last Year	
Lending Policies Discourage Quality	
\$3.3 Billion for Public Works—and More	
Large Projects Create Many Small Ones	15
Chart Illustrating the Great Variety of Private Improvements Created by Public Works Program	
Code of Fair Practice for the Construction Industry	16
The Situation at Washington—Drafting One Code for Entire Construction Industry	
Kitchens at the Fair	18
New Ideas Illustrated in Model Kitchens Displayed in the Century of Progress Homes	
Bathrooms at the Fair	20
A Pictorial Spread of the Latest Ideas in Bathrooms, Their Arrangement and Fixtures, Which Have Intrigued the General Public at the World's Fair	
Strand and Chapple Interpret the Steel Houses at the Fair	22
"Not a Prefabricated House," and "Great Opportunity for Builders and Dealers," Is View of These Authorities	
Public Interested in Air Conditioning at the Fair	24
What the Exposition Teaches as to Consumer Interest and Its Probable Disappointments	
Large Panel Units Outstanding Advance at the Fair	26
How "The Streets of Paris" and Other Fair Buildings Were Put Up in Quick Time	
Concrete at A Century of Progress	28
Many Striking Uses Point Way Towards Construction of Future	
Home Design Section	29-37
Twelve Popular Home Designs Presented, Two of Them Being for "Homes That Grow"	
Federal Mortgage Aid Outlined	38
Procedure Under New Home Loan Act	
Modernization Department	39-43
Home Modernizing with Stucco	
Kansas City Area Pledges \$11,000,000 for Renovizing	
Apartment Modernizing Pays	
Practical Job Pointers	44
News Department	46
Regional Public Works Advisors Appointed	
Real Estate Survey Shows Improvements	
What's New Department	50
Advertisers' Index	58

BERNARD L. JOHNSON
Editor

JOSEPH B. MASON
Managing Editor
H. L. LANE
Washington Editor

E. L. GILBERT
Eastern Editor
L. R. PUTMAN
Marketing Editor

ROBERT H. MORRIS
Business Manager

Area

BIT

urers

elert

ly in

ad-

the

Prod-

s Ex-

ortu-

study

ts in

It

orth-

it a

fea-

leve-

TS

C.

ING

HIO

UP

Page

..... 2

..... 48

Cover

..... 46

..... 48

..... 47

..... 7

..... 3

..... 48

..... 10

..... 8

..... 46

..... 4

..... 6

r omis-

by the

AGE.

Coming to the World's Fair?

A warm welcome awaits you at the Johns-Manville Building

WE HOPE you will visit us at Chicago. And introduce yourself as a builder. We want to show you what we are doing out here to educate the American public to a greater interest in, and desire for, better homes. Homes remodeled into safer, more attractive, more comfortable dwellings.

You will be interested in the construction of our building. Its walls are of J-M Transite, the amazing building material that's fireproof and imperishable, and at the same time smartly decorative. The entire building is insulated with J-M Rock Wool; visitors remark upon its coolness.

You will like the exterior booths at either side of the main entrance. Their displays of J-M Shingles and Siding, in richly blending colors, are a decided addition to the building's striking color scheme. At night they glow with a jewel-like beauty, as the entire building is bathed in radiant light.

ENTERING the main hall, you will have eyes for nothing but the huge mural. 90 feet long—20 feet high. Painted by Leo Katz, famous mural artist. Vital in conception and execution. Vivid in coloring. An arresting interpretation of those forces of nature—cold, heat, sound

and motion—which it is the business of Johns-Manville to control.

How successfully we exercise that control is graphically demonstrated by a series of ingenious, animated displays, ranged round the walls of the main hall.

HERE you will see flames consume an inflammable roof, while sparks fall harmlessly upon a neighboring roof of J-M Asbestos Shingles.

Here is "Forgotten House," with its leaky roof, dilapidated walls, cluttered attic, rubbish-filled cellar. A turntable revolves to show it transformed into a thoroughly modern home by the use of J-M home remodeling materials.

Here is another home with heat pouring through its uninsulated walls in summer, streaming out in winter. Lights dim, flash on again. J-M Home Insulation has been installed; heat controlled; summer comfort assured, winter fuel bills reduced.

Observe particularly the home owners grouped around the display that tells

them about the J-M \$1,000,000-To-Lend Plan which provides needed funds for home remodeling. (If you are not familiar with the plan, write us. We assume credit risks, pay dealer and contractor full cash.)

No time to cover all of the animated exhibits. There's a big room to the left to be explored. Devoted to the display of Asbestos and Asphalt Shingles, Rock Wool Home Insulation, Asbestos Wainscoting in marbled and tile designs, Insulating Board, Bevel Board—and many other items from J-M's complete line of building materials. Talk to the attendant. You will find him well versed in building problems—and thoroughly acquainted with the entire J-M line.

IN the limited space of this advertisement, we can do but scant justice to a really fine building. To the educational value and selling force of its exhibits. Come to Chicago. See for yourself. Give us the pleasure of greeting you in the Johns-Manville Building, Century of Progress Exposition, Chicago, Ill.



AMERICAN BUILDER AND BUILDING AGE

Evolution—Perhaps Revolution— in Home Building

WHAT the World's Fair visitors are taking in through eye and ear at the Housing Exhibit and elsewhere around the grounds of A Century of Progress will unquestionably have a far reaching effect on the building industry.

To date more than six million paid admissions to the Fair have been recorded; nearly a million more each week are being added. This tremendous number of potential home builders and home modernizers is getting a course of lessons in the newer ideas in home design, construction and furnishings that is bound to have a far reaching effect on their tastes and future actions.

These World's Fair visitors may go away critical of the flat roofs, the plane surfaces, or of some other detail of the newer style homes, but they will "never be the same again." They have experienced the shock of a totally new standard; and when they get back home the old house is bound to suffer by comparison. It may not look any worse than it has for the last five years; but the returning World's Fair visitor will see it in a new light—and something is apt to happen!

Homes in the Spotlight

At A Century of Progress, more than at any previous fair, homes and home equipment have been in the spotlight. The group of exhibit houses near Home Planning Hall has "outpulled" the Hall of Science, and vies with The Streets of Paris itself in attracting the crowds of visitors. It is reported that 750,000 people have already gone through the Rostone house; the All-lumber house has entertained 500,000; the Stran-Steel house 350,000, of whom 3,000 are recorded as live prospects with plans for early building; the House of Tomorrow has collected a 10-cent admission fee from 150,000.

All of this certainly indicates a live interest on the part of the average American in the subject of home building and in the newer ideas in home design, structural stability and comfort standards, which pervade this modern housing display.

The public is keyed up to expect something newer and better from the home building industry than has ever been obtainable in the past; and the exhibitors at the fair have made good. They have uncovered a new realm and have set up new standards.

As a show their work is a spectacular success.

What will the results be?

In all logic, 90 per cent of the homes of America—

made hopelessly out of date by these newer standards—should be pulled down or completely overhauled. Architects and other home planning agencies should be busy on new designs to meet the ideas of these millions of Progress visitors. Contractor-builders should be revising their technique to qualify for handling the new work in the new way. Dealers should be on the alert to investigate and handle the new lines.

But all of this requires study and effort. Perhaps it's too much to expect. Maybe the old timers will just go their way and leave it to the younger men to pioneer the opportunities of today.

If so, these newer ideas will indeed work a revolution in this age old industry!

However, if the stimulus of these newer ideas can be added to the experience of the seasoned men among architects, builders and distributors, a safer development would result—an evolution within the industry, rather than a revolution from without.

All indications point to an early resumption of home building in volume. Contracts for July exceeded last July by 25 per cent and made this the third consecutive month to go ahead of last year. With the New Deal working, wages and employment up, and general business improving, the prospects seem good for considerable building this coming fall and still more next spring. The Century of Progress will set many of the standards for this activity, and those best informed and best qualified by sympathy and understanding will naturally take the leading places in this new era.

JULY HOME BUILDING 25 PER CENT OVER LAST YEAR

HOME building contracts for July exceeded those for July of last year by about four million dollars for the 37 states east of the Rockies, according to estimates based on the records of the F. W. Dodge Corp., for contracts reported in the first half of the month. These totaled \$12,070,000 for residential construction and \$43,051,600 for total construction, including commercial structures and public works. For residential building this indicates that all of July will show about twenty-four million dollars, whereas last July recorded nineteen and three-quarter million.

The June home building contracts of this year went ahead of last by a little over four and a half million.

Thus the 1933 gain for July over 1932 is seen to be holding at about the June rate.

Residential building this year is doing better than other classes of construction. The May records show home building as 17 per cent of the total, June 27 per cent and July 29 per cent.

General Business Is Better

Other business indicators show a steady improvement, with volume increasing, more employment and many firms and corporations again showing a profit. On July 27 Secretary of Commerce Daniel C. Roper summed up the situation as follows:

"Emphasizing again the fact that we are far from the top of the hill, we see, nevertheless, betterment clearly apparent from a study of the sober statistics.

"Considering first the increased activity in the manufacturing industries, we find that even after making allowances for the usual seasonal advances manufacturing plants increased their output 45 per cent, on the average, from February to June. Automobile factories advanced their production schedules and output by 100 per cent, food processing establishments by 13 per cent, iron and steel mills by 132 per cent, and the textile industry by 60 per cent. Factory employment adjusted for seasonal variations increased 9 per cent, and pay rolls showed a total gain of 15 per cent.

"Since March approximately two million people have returned to work. Although consumption has failed to keep pace with the rate of production, the index of department store sales adjusted for seasonal variation advanced 10 per cent from February to June.

"Our business concerns are advancing out of the red, many report increased earnings, and fewer establishments are going to the wall. Commercial failures, which were 2,378 in February, fell to 1,648 in June; the liabilities involved decreased from \$79,101,000 to \$35,345,000.

"The position of the farmer has greatly improved. The Bureau of Labor index of wholesale prices has advanced 9 per cent since February, while the price indexes of farm products and foods advanced 30 per cent and 14 per cent, respectively. The National Industrial Conference Board's cost of living index advanced but 1 per cent.

"Freight car loadings moved upward. Newspaper lineage increased. Foreign trade showed some improvement.

"One could go on almost indefinitely citing evidences of improving business and returning confidence."

LOANING POLICIES DISCOURAGE QUALITY

CLYDE A. MANN of the Certified Building Registry, writing to a prominent manufacturer of plumbing goods, denounces the appraisal methods used by banks, building and loan associations and life insurance com-

panies in making mortgage loans. He asks this pertinent question: "Has it occurred to you that the market for the better class of plumbing fixtures was restricted to something like 30 per cent of the total building programs because the financing methods did not demand as much certainty about the building as they did about the title to the land? Poor standards could 'get by' and did from one coast to the other."

Continuing Mr. Mann states, "The papers today reported foreclosure sale of the Lincoln Building in New York City—in itself a vast market for plumbing fixtures. The bank which financed that building not only did not require the best, which would have added to attractiveness for occupancy and gross rentals, but condoned the cheapening of most materials. So the MONEY took value out of the building, and you can see the effects on every floor."

\$3.3 BILLION FOR BUILDING— AND MORE

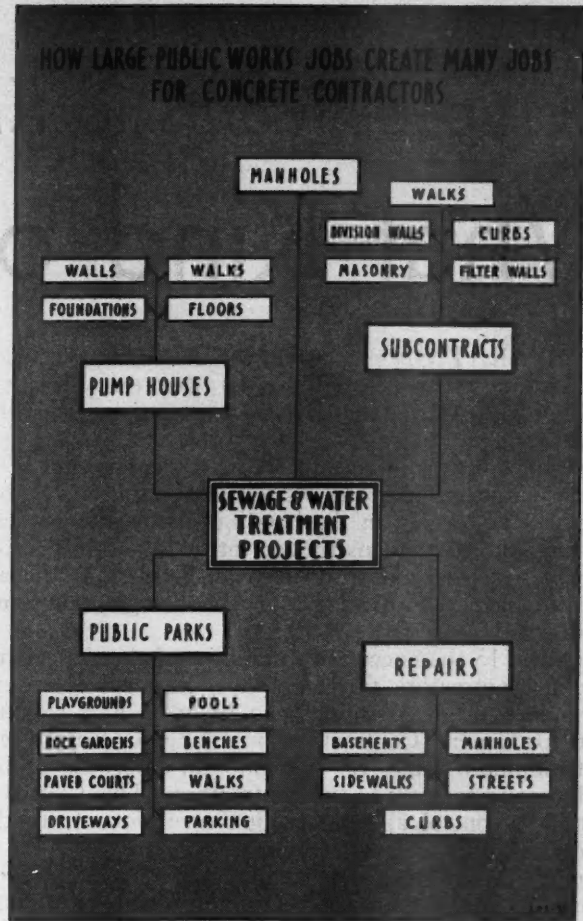
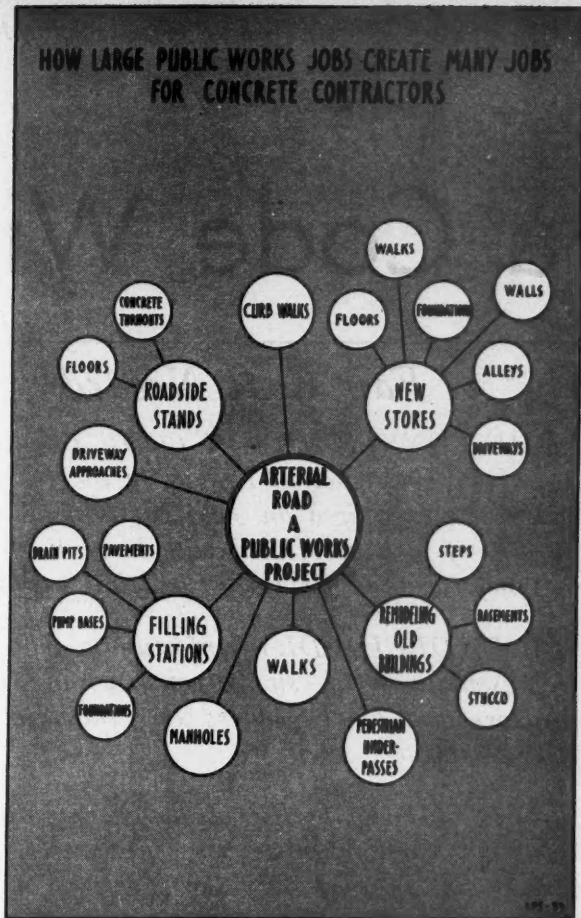
PRESIDENT ROOSEVELT has given full speed ahead orders on the \$3,300,000,000 program of public works. What this means to the building industry very few as yet fully realize. It means more business for everyone, large and small contractors alike.

The country has been divided into ten regions for the administration of this work, thereby getting away from state political control. Local work is to be done by local building interests using, as far as possible, local materials and paying the prevailing wages of the region.

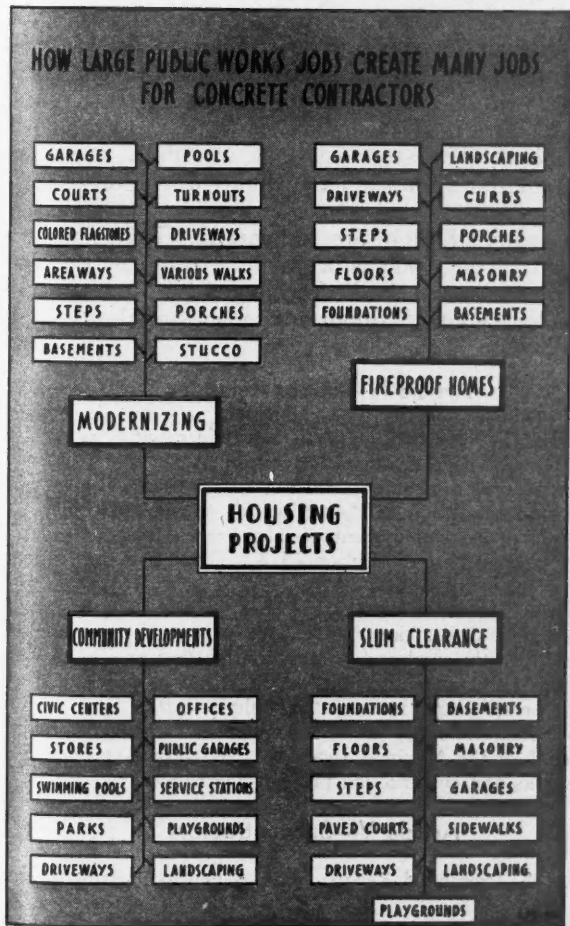
For the smaller contractors who are not equipped to handle large public works, there is great encouragement in this program. For every big job let, there are hundreds of small jobs created. The charts on the opposite page prepared by engineers of the Portland Cement Association quite clearly show this. Every contractor, carpenter and dealer should make it his patriotic duty to see that the good performed by this great public works program does not stop with the expenditure of public money alone. The country cannot build its way to prosperity on public financed work alone. This program should be used as the stimulus, the starter, for a still greater and more economically sound program of private work.

The place to begin is in the small projects associated with the bigger works. What many of these small works are can be seen on the charts. They are worthy of pushing by the building industry, and there are many more projects that can be started, to be financed by private funds, coincident with the beginning of this \$3,300,000,000 building program.

The placing of billions of dollars into the building industry cannot help but have a beneficial effect on every active man in it. It means work for subcontract groups that control a great portion of the money thus expended. It means better conditions in the building industry and in the country as a whole. But it can be made to accomplish a still greater benefit if accompanied by privately financed jobs of the type suggested on these charts.



The \$3,300,000 Federal Building Program Will Make Many Smaller Jobs



Everyone Wants to Know—

What Kind of a Code Will

PREPARATION of a Code for the entire construction industry which will vitally affect every builder, large or small, in the country is now going forward in Washington.

One of the first important steps, the appointing of a Code Committee, indicates that the preparation of this Code will be largely in the hands of large Eastern engineering and heavy construction interests. Considerable surprise has been expressed also by builders at the attempt to include so diverse a group of engineering and professional interests.

On July 15 the executive committee of the Associated General Contractors filed with the National Recovery Administration at Washington a Code of Fair Competition for General Contractors, providing for local-agreement minimum wage, 150-hour month, outlawing of bid peddling and fairness to sub-contractors. This Code was offered to control all construction operations from the largest down to a \$1,000 minimum contract.

General Johnson, Federal Administrator, however, refused to accept the A. G. C. as representative enough of the construction industry to justify approval of this Code. He handed it back with instructions to get a broader backing behind it.

The Construction League of the United States with offices at 1741 New York Avenue, N. W., Washington, D. C., offered its services in this emergency for the preparation of a code of fair competition for the construction industry as a whole, and to co-ordinate codes now presented or to be presented from various subdivisions.

At a meeting of the governing body of the League on July 26, Malcolm Muir, Deputy Administrator of the National Recovery Administration, accepted this offer of service. An Advisory Council composed of delegates selected by professional and trade associations, representative of subdivisions of the industry, was chosen and the first meeting was held on July 31 at the Willard Hotel, Washington, D. C., to consider matters pertaining to a national code for the construction industry.

Among the professional and trade organizations invited to participate in this meeting were: American Concrete Institute, American Institutes of Architects, Chemical Engineers, Electrical Engineers, Mining and Metallurgical Engineers, Steel Construction, American Road Builders Association, American Societies of Civil Engineers, Landscape Architects, Mechanical Engineers, Municipal Engineers, American Water Works Association, Associated Equipment Distributors, Associated General Contractors, Contracting Plasterers, Heating and Piping Contractors, Cut-Stone Contractors, Master Painters & Decorators, Mason Contractors, Building Trades Employers, Marble Dealers, Master Plumbers, Ornamental Iron, Bronze and Wire Manufacturers, National Committee of Building Congresses, Portland Cement Association, Producers Council and the Roofing and Sheet Metal Industries.

The personnel of the Code Committee of the Construction League consists of the following: chairman, Stephen F. Voorhees, of Voorhees, Gmelin & Walker, architects, New York; vice chairman, John P. Hogan, of Parsons, Klapp, Brinckerhoff & Douglas, engineers, New

A Fair Code Needed

THE CONSTRUCTION CODE Committee of the Construction League of the United States, as organized on July 26, is made up largely of men associated with large Eastern engineering and heavy construction works.

IT IS DECIDEDLY unfortunate that no representatives of small construction contractors and home builders were included on this committee.

IT IS THEREFORE all the more important that the committee be scrupulously fair in considering not only the problems of the large city builders but also of the small contractors and home builders who lack organization and representation.—The Editors.

York; W. T. Chevalier, New York publisher; P. W. Donoghue, of P. W. Donoghue Co., Master Plumbers, Boston; F. P. Byington, of Johns-Manville Corp., New York; William Steele, 3rd, of William Steele & Sons Co., Contractors, Philadelphia; C. H. Dabelstein, of S. H. Dabelstein & Sons, Master Painters, New York; and A. E. Horst, of Henry W. Horst Co., Contractors, Philadelphia. The secretary is J. W. Follin, formerly engineer of the Philadelphia Federation of Construction League.

Since many of these are stalwart A. G. C. men it is expected that the Code as originally evolved by the General Contractors will be little changed by this maneuver for broader backing. Important sections of the A. G. C. Code follow:

Article IV—Labor Relations

Section 1. Labor Conditions—In accordance with the requirements of the National Industrial Recovery Act:

(c) A general contractor shall not resort to the use of what is known to the trade as "piece work" or similar contractual relationship in his employment of labor, when tending to defeat the spirit and purpose of Section 7A-3 of Title I of the National Industrial Recovery Act.

Section 3. Maximum Hours—

(a) A general contractor shall not permit nor require any individual directly employed on any construction project to work more than 150 hours in any one month, so far as practicable and feasible; *except* those in executive, administrative and supervisory positions, and *except* as a lesser number of hours is required by Title II of the National Industrial Recovery Act relating to public works and construction projects thereunder.

Article V—Subcontractors

Section 2. Prohibited Rebates, &c.—A general contractor shall

The Building Industry Get?

not give or accept rebates, refunds, allowances, unearned discounts or special services to or from subcontractors, material vendors or others which are not extended under like terms and conditions to other purchasers of material or services of equal credit rating.

Section 3. Financing—A general contractor shall not permit subcontractors or material vendors on a specific contract to finance or guarantee his accounts.

Section 4. Bids Confidential—A general contractor shall not convey to any subcontractor or material vendor any substantial information prior to the award of the particular subcontract relating to the bid of any other subcontractor or material vendor who has made a bid to him or to any other general contractor, nor shall he mislead or deceive any subcontractor or material vendor as to the amounts and conditions of other bids for the purpose of obtaining a lower bid.

Section 7. Plans and Specifications—A general contractor shall not be held responsible or penalized for deficiencies in or omissions from the plans and/or specifications prepared by others and upon which the contract is based.

Article VI—General Contractors

Section 1. Qualification—A general contractor shall be properly qualified by capital, organization, experience and equipment to bid upon and properly execute the construction contract which he undertakes.

Section 2. Performance Records—A general contractor submitting a proposal for public works construction shall, as an essential precedent condition of qualification for public works construction, file his performance record with the Bureau of Contract Information, Washington, D. C., or any other agency authorized and designated by the Public Works Administrator provided by Title II of the act. Such records shall be available only to those entitled to information by reason of their responsibility for the award of contracts, the writing of contract bonds or the extension of credit. A general contractor shall keep such records current by submitting supplemental data at such periods as the agency shall prescribe.

Section 3. Credit Information—A general contractor shall make available upon request to those responsible for the award of construction contracts, pertinent information as to his current financial position, using the standard questionnaire forms developed and approved by and available through the Joint Conference on Construction Practices, Washington, D. C.

Section 4. Reports and Accounts—(a) A general contractor shall maintain a system of making reports and shall keep adequate accounts as provided in Title I, Section 3A, Paragraph 2 of the National Industrial Recovery Act. All moneys received and expenditures made shall clearly show the allocation, to each improvement of real property or a public improvement, of the funds received and disbursed on account thereof.

(b) Funds received by a general contractor for construction work shall be accepted and applied first for the purpose of paying proper costs of making such improvement, including amounts due to employees, material men, subcontractors and others. This shall not be construed to require a general contractor to keep in separate bank accounts or deposits the funds received under separate contracts, provided that books of account shall clearly show the allocation to each and every contract of the funds deposited in his general or special bank account or accounts.

Section 5. Contractual Agreements—The following bases of contractual agreements are recognized as fair trade practices, guaranteed price, cost of the work plus a fee, unit price, lump sum and other contractual methods not inimical to the public interest, providing that the regulations proposed by this code of fair competition are met.

Section 6. Submitting Bids—A general contractor, in submit-

AN IMPORTANT TELEGRAM

JULY 31, 1933

J. W. FOLLIN, SEC'Y OF CODE COMMITTEE,
CONSTRUCTION LEAGUE OF U. S., WASHINGTON, D. C.
NOTING ABSENCE ON CODE COMMITTEE OF ANYONE REPRESENTING SMALL CONSTRUCTION INDUSTRY BUILDERS, SUCH AS RESIDENTIAL CONTRACTORS AND CARPENTER CONTRACTORS ENGAGED IN MODERATE COST, WIDELY SEPARATED PROJECTS, RESPECTFULLY SUGGEST THAT INTERESTS AND WELFARE OF THIS UNORGANIZED UNREPRESENTED GROUP BE CONSIDERED. IN NORMAL YEAR BUILDERS OF THIS CLASS DO MORE THAN FIFTY PER CENT OF TOTAL CONSTRUCTION VOLUME. ANY CODE SHOULD FULLY CONSIDER THEIR INTERESTS AND THEY SHOULD BE REPRESENTED IN YOUR COUNCILS.

BERNARD L. JOHNSON, EDITOR,
AMERICAN BUILDER.

ting bids for the construction or improvement of either public or private works, shall be governed by the following regulations necessary to insure fair competition, since it is essential that whenever contracts are to be let by competitive bidding, terms of the competition shall insure parity of standing to all bidders:

(a) All bids shall be in writing signed by the bidder.

(c) A general contractor shall not revise his bid after bids have been opened in order to improve his position with the owner, except he be the low bidder. Bona fide errors discovered after the opening of bids may be grounds for withdrawal of bid. He shall not encourage or induce the owner or his agent to reject bids and readvertise in order that he may revise his original offer, nor shall any general contractor bid upon a construction project upon which bids have previously been invited, received and opened at any time within ninety days from the date of the previous opening of bids next thereafter, except there be substantial changes of the plans and specifications.

(d) A general contractor shall not knowingly submit a bid nor accept a contract which does not include all direct and indirect costs and include a reasonable amount for profit and he shall maintain and keep on file his original estimates supporting his bid or contract.

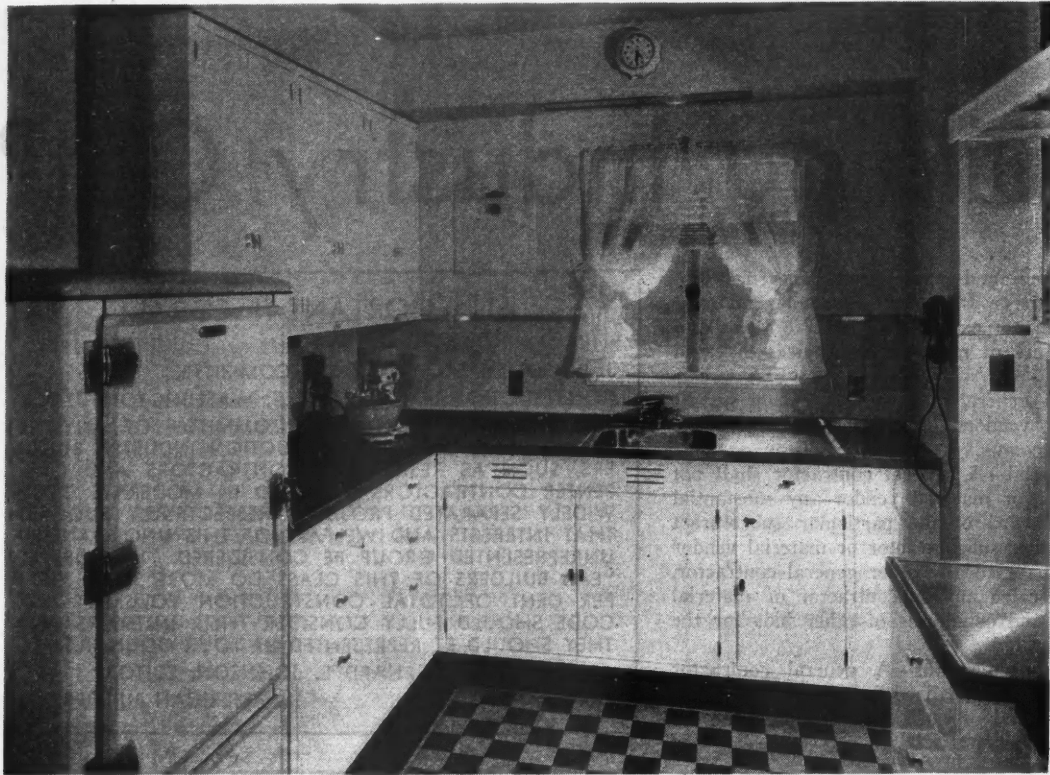
Section 8. Unfair Practices—A general contractor shall not engage in the unfair practice known to the industry as "bid peddling" or any similar unfair practice. He shall not knowingly aid or engage in an unfair trade practice, whether or not specifically described in this code, and shall refuse to deal with any person or persons who have not complied with the code of fair competition herein defined.

Section 9. Surety—A pre-qualified general contractor, who has met the necessary qualifications entitling him to the work, but who is unable, due to conditions beyond his control, to obtain the proper surety required by the contract may agree with the owner and the National Industrial Control committee for general contractors upon a suretyship of some other nature.

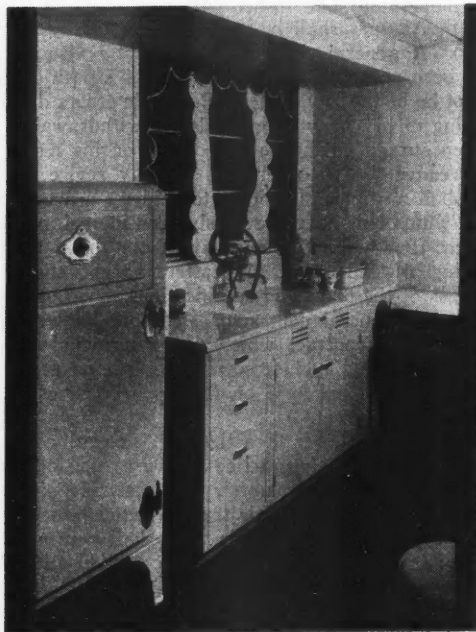
Section 10. Disputes—A general contractor shall be ready and willing to settle disputed matters promptly. Where arbitration as a method of settling disputed matters is agreed upon, the rules of procedure as established by the American Arbitration Association shall govern, except as otherwise required by law. Payment shall not be withheld from the parties affected exceeding that sufficient to cover the amounts in dispute.

Article VIII—Administration

(b) Amendments or revisions may be proposed by general contractors, acting through their national trade association designated as the Associated General Contractors of America.

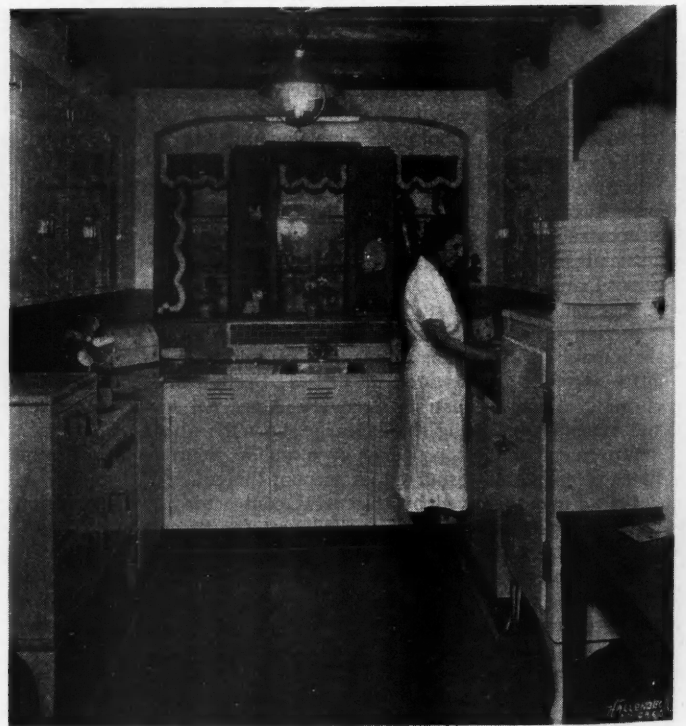


THE STRAN-STEEL HOUSE at the Fair, an outstanding modern structure of steel and concrete, boasts this gleaming kitchen. Sectional steel cabinets, monel metal sink and work top, a modern gas stove and an electric dishwasher are important parts of the equipment. The window treatment is interesting and the Venetian blinds attractive.



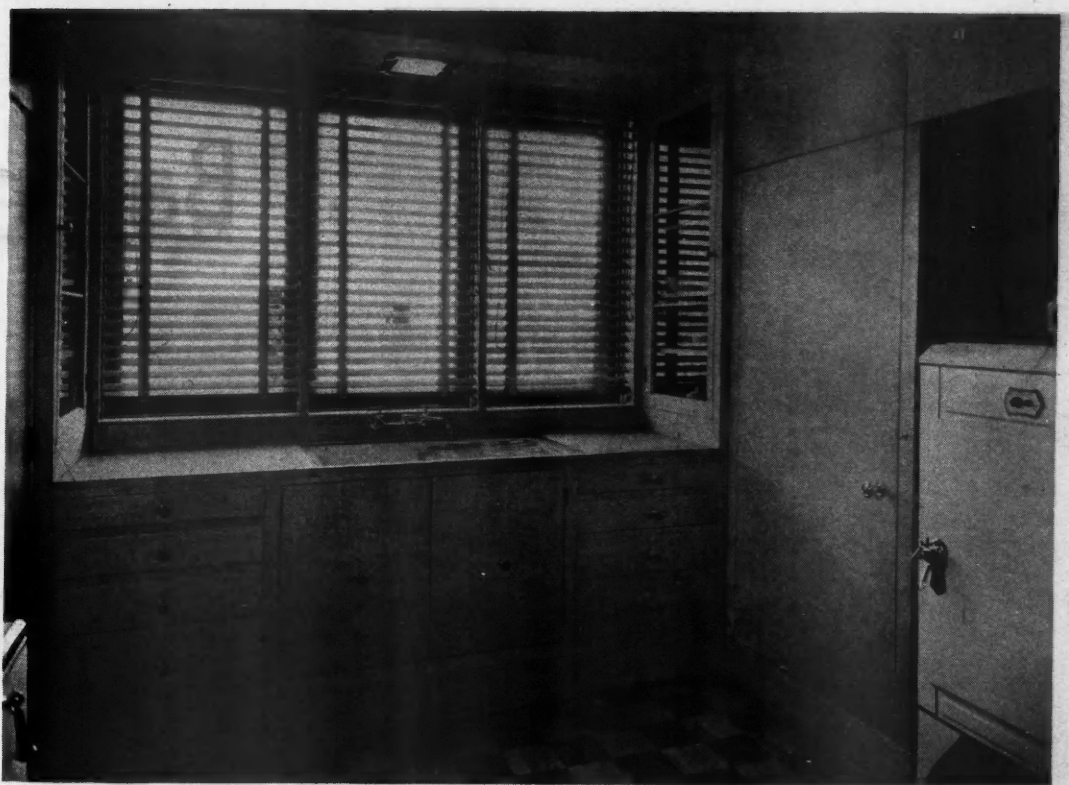
THIS VIEW of the Armco-Ferro house kitchen shows a porcelain enamel sink top placed over straight line metal cabinet bases. The kitchen is long and narrow but efficiently arranged, as can be seen by referring to the view of the other side on opposite page. Floors are of dark, heavy linoleum, coved at edges. Walls are of tile.

Kitchens

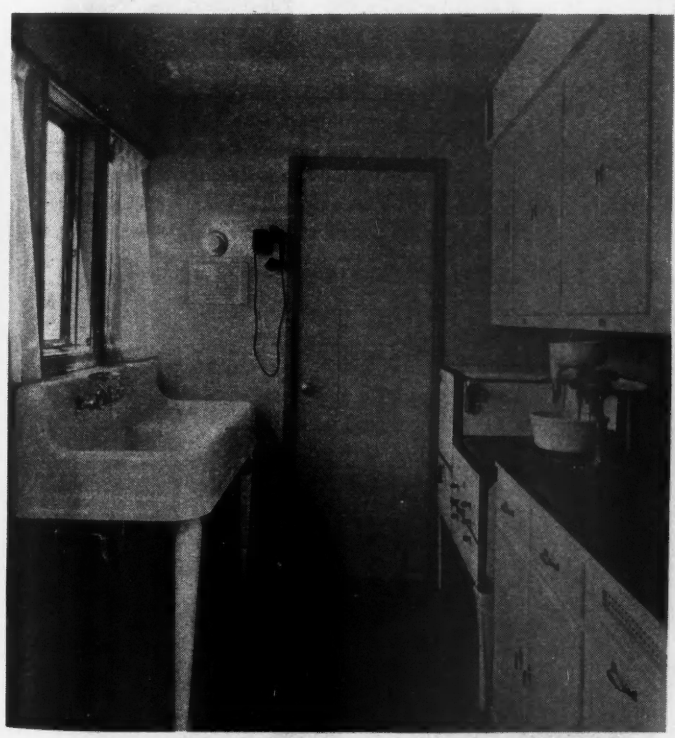


THIS MODEL KITCHEN is shown in the Electrical Exhibit and much light on the construction of modern kitchens can be had by studying its details. The U-shaped arrangement is efficient. Cabinets are well placed, and the whole interior is of a gleaming, glistening cleanness that makes the visiting Fair housewives exclaim in delight.

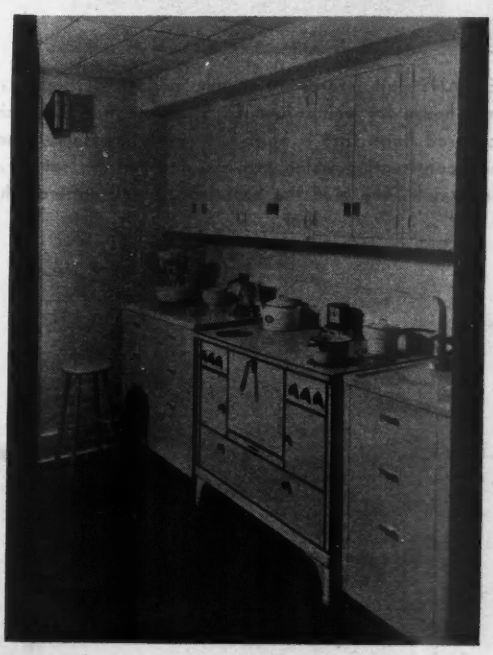
THIS ALL-WOOD KITCHEN is located in the Lumber Industry's Sunlight House and has attracted much favorable attention. Cabinets and paneling are in maple; floors are of attractive wood block construction. The Venetian blinds are attractive and let in light without cutting out air. The concealed light above the sink is modern and efficient.



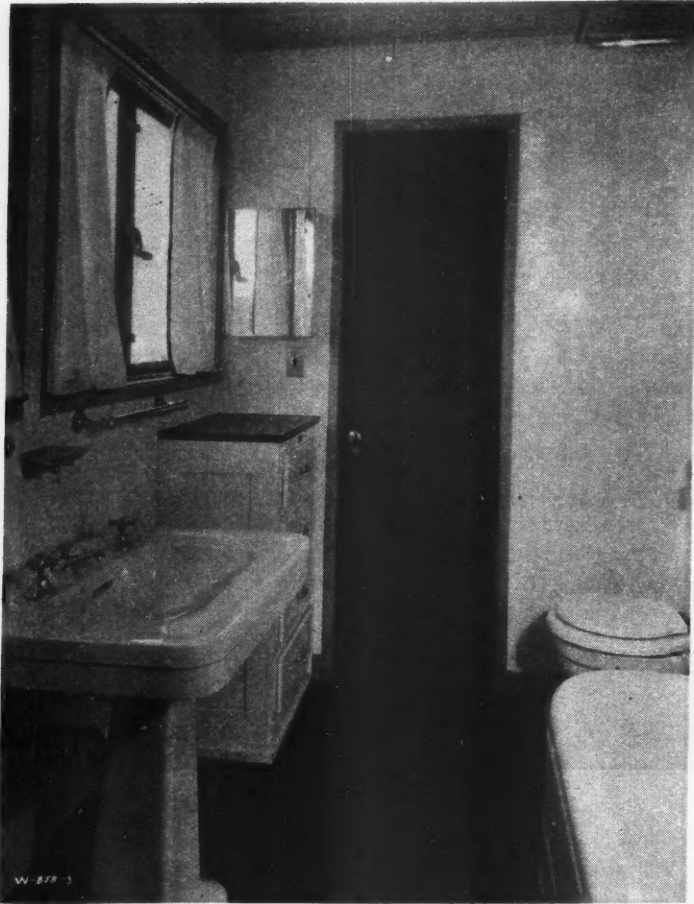
s at the Fair



THE DESIGN FOR LIVING HOUSE shows this modern kitchen which is small, compact but efficient. The window and curtain treatment is unusual. Several of the Fair kitchens, including this one, are given a lacquered finish applied over smooth wallboard or pressed wood which produces a gleaming, washable, hard surface like metal,

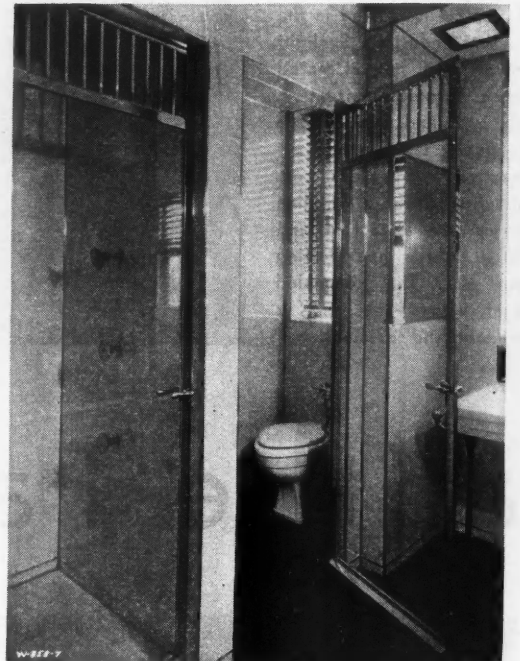


ANOTHER VIEW of the kitchen in the Armco-Ferro house which shows the straight line arrangement of equipment against one wall. Cabinets are of metal and come in wide range of sizes suitable for any kitchen, and are quickly installed, using a patented recessed back construction.

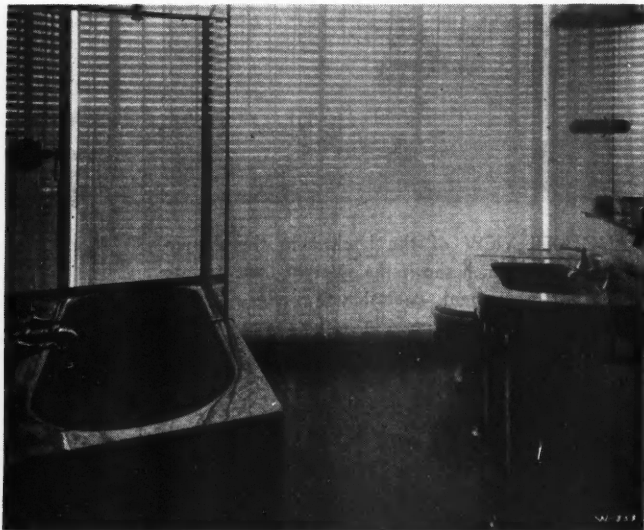


EXTREMELY PLEASANT and interesting is this modern bathroom in the "Design for Living" house for which John C. B. Moore was the architect. Walls have a lacquered finish that is hard and resists moisture. The windows are of a new construction which provides for curtains set in at the top in an efficient way. They give the bathroom a well lighted, cheerful look.

Bathrooms



THE LUMBER INDUSTRIES' HOUSE displays this gleaming glass bathroom with toilet seat separated from washroom and shower by glass door. Walls are of Formica, a hard, smooth composition material.

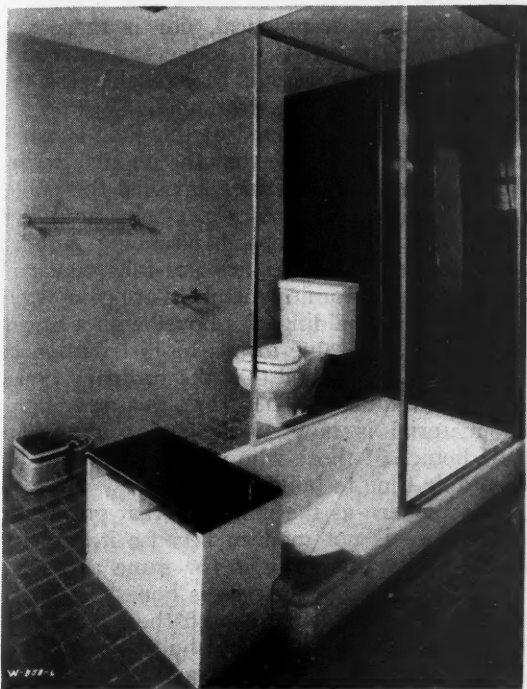


THE ALL-GLASS "House of Tomorrow" is one of the most unusual structures at the Fair, and this bathroom follows suit. Venetian blinds and floor length curtains cover the glass wall.



GLASS-LIKE WALLS of hard, shiny material line the Rostone House and produce this impressive bathroom. The open built-in cabinet between lavatory and tub is an attractive feature.

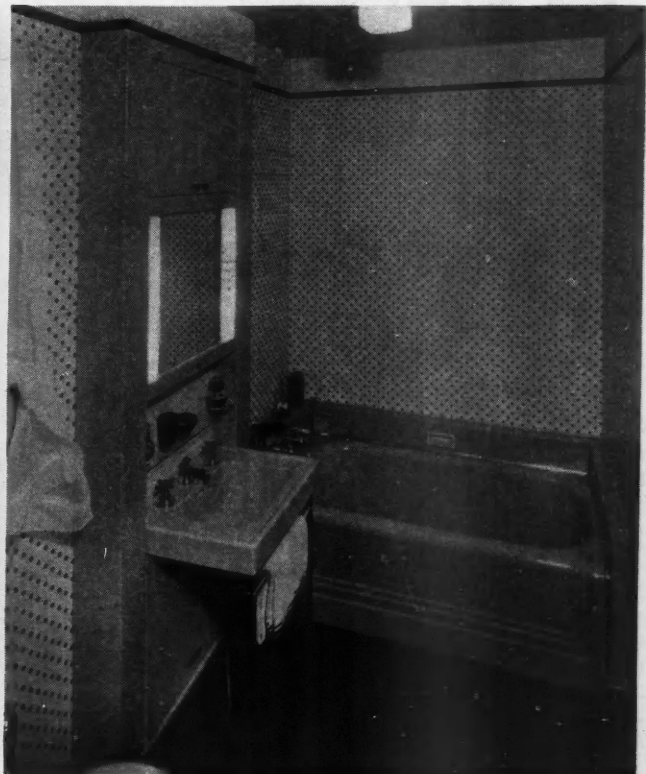
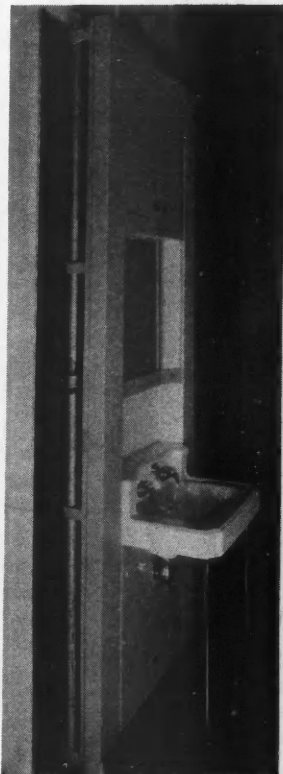
at the Fair



THE STRAN-STEEL HOUSE has a bathroom with a new idea. It is divided in three sections so that it can be used by three people at the same time. Walls are covered with the new light weight linoleum, floors with black marbled, inlaid linoleum and dados are of the same material. Fixtures are a soft ivory color, and they are matched by yellow organdy curtains and white Venetian blinds.

ABOVE IS SHOWN the unusual bathroom of the Florida Tropical House at the Fair. The new type shower arrangement with glass walls is a striking feature. Florida tile is used for the floor.

THE PICTURES AT RIGHT illustrate a new development in plumbing and bathroom construction that is on display at the Fair. Fixtures are delivered as part of a complete panel ready for quick installation. It is not necessary to break plaster in remodeling work for the pipes run direct to floor. They are concealed by a panel as shown in the picture. The tub is set out from the wall so that pipes may be handled the same way. This is a new development which home builders are watching with interest.



STRAND and CHAPPLE

Interpret the Steel Houses at the Fair

THE public generally seems to hold two mistaken notions regarding the exhibition houses at A Century of Progress—First, that they are examples of pre-fabrication or factory mass production and—Second, that they forecast a radical change in the channels of distribution and construction within the building industry. The houses of steel construction at the Fair, in particular, seem to be misunderstood.

In order that the business men of the home building industry may have a correct view of these matters, the *American Builder* has invited two representative steel house men to make statements, setting forth the true facts.

"NOT A PRE-FABRICATED HOUSE"

By Carl A. Strand

President, Stran-Steel Corporation

As a result of the wide publicity given pre-fabricated homes, which are still in the idea stage, many of the people who visit the Housing Group at A Century of Progress think that there are large factories equipped to manufacture pre-fabricated homes in room and panel units, suitable to a variety of room arrangement and a wide range in price.

As a result of this misleading publicity, people believe that there are, associated with these large factories which make pre-fabricated houses, home financing organizations which help the prospective home owner buy his lot,

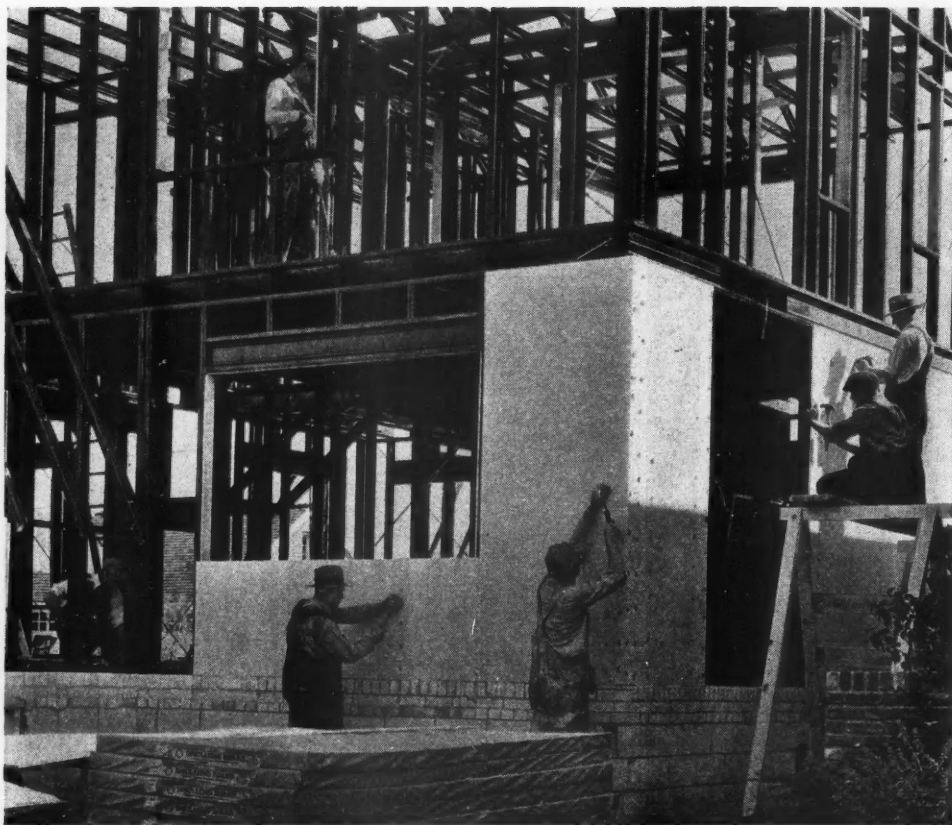
build his house, and furnish it, all under one operation.

Such a set-up is quite impractical, nor is there any basis in the economic conditions of today for entertaining hopes that such a system will be available for the average man within the next generation.

The Stran-Steel House exhibited at the Fair is not a pre-fabricated house in the sense that the popular write-ups in the newspapers and magazines have led the public to believe. Stran-Steel is of course pre-fabricated just as brick, gypsum board, fiber board, plumbing, kitchen equipment, and ordinary lumber are pre-fabricated; in the sense that these steel framing members are completely manufactured. But the building of a house with a Stran-Steel frame calls for the same means of distribution of material, contracting, and labor that the ordinary house with a wood frame requires. Therefore, this new standard building material is now available for immediate erection in the homes of those who now realize that this is a most favorable time to build a home.

A house is as modern as the materials that go into it. To say that a house is not modern because it uses old established types of architecture is the same as saying that a man is not modern because he is honest, industrious and dependable. Houses built with the frame work of steel and the well known collateral building materials for interior and exterior walls, floors and roof are fire-resisting, proof against tornadoes, earthquakes and lightning. They resist termites, vermin and dry rot. They should not depreciate from rust or weathering, if the exposed walls and floors are properly cared for, because the steel frame itself is well covered with a rust-resisting enamel.

There is one outstanding reason why it is possible to build permanently and economically with this steel frame. The collateral building materials are all nailed to Stran-Steel. The use of the hammer and nail in the erection of shelter is the best known and the cheapest method of building. By means of its unique nailing slot, these steel members take advantage of this universal and easy method, and provide the permanence, safety and flexibility of the best in modern construction.



Carpenters nailing sheathing to Stran-Steel studs. Customary procedure marks both design and construction.

"OPPORTUNITY FOR CONTRACTORS AND DEALERS"

By Bennett Chapple

Vice President, The American Rolling Mill Co.

A few weeks ago I happened to mention to a friend that I was speaking to a group of lumbermen that evening on the subject of the metal house. My friend remarked, "If you talk about steel houses in front of that group you'll be as popular as a mouse in a cupboard."

But my friend was wrong. That group of lumbermen was a most attentive, open-minded audience. Because they understood the business of home building, their questions were to the point. This and numerous companion experiences have convinced me that the public at large, and the building supply dealers in particular, are receptive and almost eager to learn more about the various new developments in home construction. Further, I believe these new developments will be accepted just as rapidly as the developers can prove their advantages. Every one is "from Missouri" and is waiting to be shown. That is a sound and well justified viewpoint, and intelligent salesmanship on the part of those who have new things to offer must do the showing.

Sheet metal is in many respects a material new to substantial home construction. Every new material has to "crash the gate" of public acceptance. It has to demonstrate its economic advantages and other improved characteristics.

The expanding uses for steel is a well-known story. It is used extensively wherever steel is best adapted to meet the requirements of some particular product. Its acceptance in the home building industry has been delayed because we in the steel industry have not until recently given real thought as to how sheet metal could be advanced along the wide front of the building industry. Sheet metal has been used for roofs and siding, and we let it go at that. But not today!

For a good many years, folks have prophesied that steel was a logical material for home building. The feeling has prevailed that when steel was so accepted, it would involve the creation of an entirely new building craft. Subsequent events, however, have proved that to be a misapprehension, for each of the existing crafts is tied into metal house construction as readily as with conventional materials. Especially, does this apply to the carpenter.

One of the great barriers to the progress of fabricated steel in home construction is its supposed dimensional inflexibility, the difficulty of joining units together, and of fastening finishing materials to it. The construction of the metal homes at the World's Fair was done for the purpose of demonstrating to the building industry certain economic values of steel, and the ease with which it can be used in construction. Take for instance the Armco-Ferro and the Stran-Steel porcelain enamel houses; they were built mainly by carpenters and sheet metal workers assigned by the Trades and Labor Council of Chicago. None of these men had the slightest conception of the work until it actually started. When they first came to the job they were somewhat awed by the fact that it was a new development, and they really expected a complex job where dimensions had to be met with micrometer precision. After the first day, they caught the fundamental idea, and thereafter they were able to carry on without difficulty.

The steel house isn't as complex as it appears to be at first glance. I believe I am safe in saying that any first class builder can, with a comparatively short experience,

work with steel construction as readily as he works with frame construction.

What does this mean to the building supply dealer if not a challenge to prepare himself for the distribution of new materials? He has met the same situation before in the introduction of building materials that today are definitely recognized as profitable items of merchandise. Building paper, insulation board, asphalt roofing materials, veneered brick, lime, and even lumber, itself, in its various shapes have all had to make their own way into the building supply dealers' warehouse for the convenience of the local builder and contractor.

It is probable that all building supply dealers will not engage in the distribution of metal construction units. On the other hand, every one is in position to increase his business by the supplying of finishing materials such as insulation, paint, flooring, glass, sash, hardware, and the innumerable other items that are used in finishing a home. Those items themselves far outweigh the cost of the metal chassis which will probably be supplied by those who desire to specialize in metal construction units.

The steel house has suffered from too much dramatic publicity. The idea of wrapping up a house all bound round with a woolen string, like a pair of shoes, and handed over the counter to the waiting public, is intriguing, but largely a figment of the imagination. Such stories have hurt the introduction of steel in home building rather than helped. No one knows this better than the iron and steel manufacturer.

The challenge that the pre-fabrication of units would spell the death knell of building supply dealers is not a fact. What is a door or a window but a pre-fabricated product? Yet when these were first offered no doubt many felt they were robbing the building supply dealer of the opportunity to cut his glass with the old fashioned glass cutter, piece by piece. Pre-fabrication, as now being worked out in some of the new houses at the World's Fair, gives a wide architectural latitude.

Rather than being looked upon askance by the building supply dealers, the pre-fabricated home should be welcomed as the rising sun of new opportunity to stimulate the home building industry with new offerings of materials and design.

These World's Fair houses are presented as a development—not a revolution. To the extent the building supply dealers seize the opportunity to accept these innovations in the way of building materials and to market them, will they be keeping abreast of the moving times.

To succeed, the steel house development must prove itself to be an integral part of the home building industry. Its natural development will be through the regular channels of the building supply dealers who will take the pains to understand where their service can be efficiently and economically utilized. Without any question, steel is in the spotlight today in connection with home building. It must find its place in the economy of home construction if it is to grow and develop in this particular field. Antagonism from any source that does not first investigate the possibilities can only delay the ultimate if the new ideas possess real economic values.

My own company—and as far as I know this applies also to other steel companies—is not engaged in the house building business. We are seeking only to establish the use of steel in new ways to create new markets. In this we have a common cause with every other industry, and hope to share with them the great home building boom that seems to be in the offing. This also means a great challenge to the building supply dealer to be ready with materials new and old to meet the forthcoming demands of the industry. To this extent *our way lies together.*

AIR CONDITIONING At Fair

HEATING AND AIR CONDITIONING displays are good but visitors' questions indicate much misunderstanding of subject.

Complete cooling for homes still impractical in moderate price range.

AIR CONDITIONING for homes, shops and stores, public buildings, trains and other places and purposes, attracts great interest at the Century of Progress. Led on by extravagant claims and newspaper publicity, most visitors at the Fair come there expecting much more than they can get—especially in the residential field.

It is very apparent that residential contractors and builders have been neglected and short circuited by the air conditioning industry. In their haste to sell the public on a novel idea, promoters of heating air conditioning equipment have passed over the important contractor and builder who, in the final analysis, is the one who will determine whether homes to be built or modernized will include this equipment, and, if so, what kind.

Complete air conditioning for homes at a reasonable price is simply not to be found in the World's Fair model homes. Experts in the industry are not surprised at this fact, but it is unfortunate that the public has been led to believe that it can secure complete air conditioning at a moderate cost in ordinary houses. When a contractor is figuring on such a house and finds, when he gets down to the facts of the matter, that complete air conditioning, including adequate cooling for the entire house, would run into several thousands of dollars and then not be entirely satisfactory or reliable, he is placed in an awkward position.

Complete air conditioning, according to a well accepted definition, should provide equipment to perform the following:

It should heat the air if it is too cold, cool it if it is too warm, clean it if it requires cleaning, moisten it if it is dry, dry it if it is too moist and move it when and where it is needed in any quantity and at any velocity.

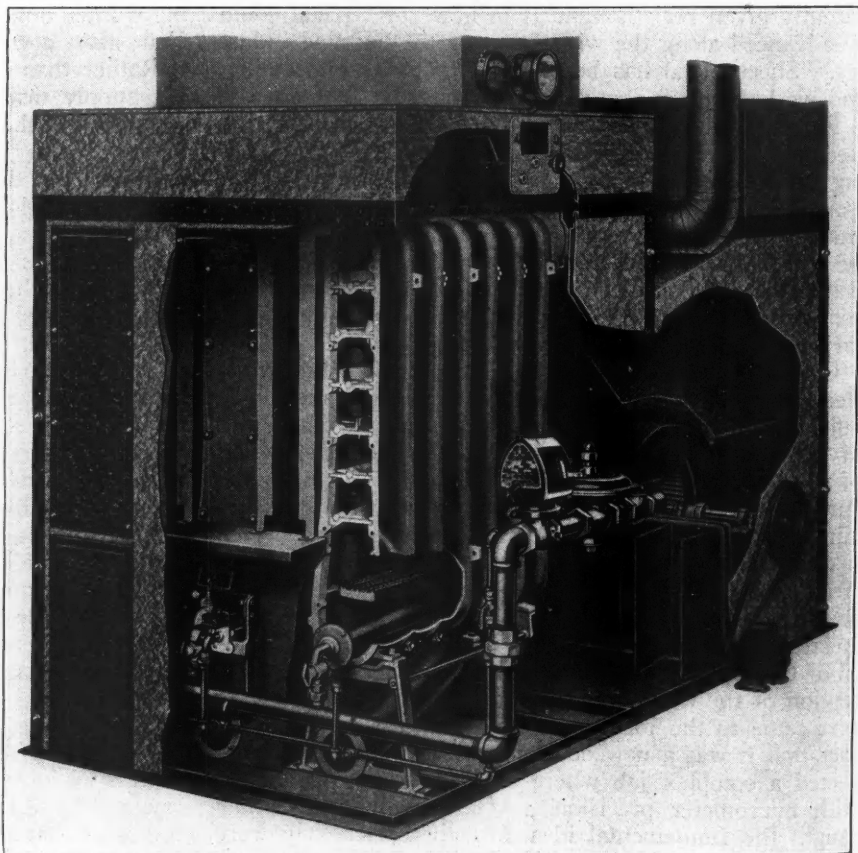
Most of the model homes at the Fair have plants that filter, warm, humidify and circulate the air. To add to these units a cooling device that will bring the temperature of an ordinary house on a hot day down to 70 degrees would apparently prove so costly as to be beyond reach of the average home owner.

A brief description of the equipment of the various houses is as follows:

STRAN-STEEL HOUSE—a gas-fired furnace supplies thermostatically controlled heating. The equipment humidifies the air in winter when it is too dry, minimizes dirt and dust by the use of filters, provides circulation of from four to



J. Soule Waterfield (right), chairman of the National Association for Better Housing and a well known Chicago builder, stops at "Home of Artificial Weather" at the Fair. He says desirable home ownership will be spurred on by air conditioning.



This gas-fired air conditioning system is installed in the Stran-Steel house at the Fair and is in actual operation. It supplies thermostatically controlled heating, provides humidification, filters out dirt, dust and bacteria, and provides forced circulation.

Attracts Attention of Builders

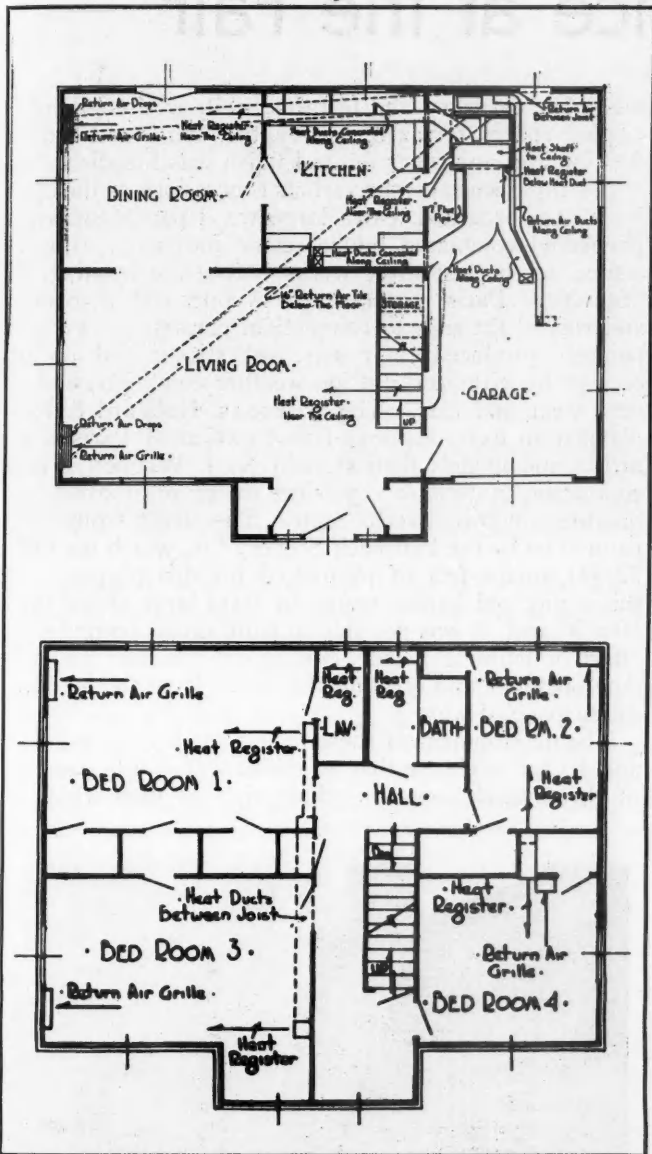


Diagram showing heating and air conditioning installation in the Armco-Ferro house. The gas-fired heater with control, filter, motor, blower and humidifier are located in heater room at rear of garage. Heat ducts are concealed along ceiling and return air ducts are placed in steel wall sections.

six changes per hour. Humidifying is performed by a spray type device.

HOUSE OF TOMORROW—Plant consists of a standard hot air system with air filters, humidifier and fan. Heating is performed by an oil burner. A 5-ton electric refrigerating unit is installed to provide cooling. By this system, water in a cooling unit is brought to a low temperature and the air is passed over it. Because of the low temperature of the water, the air is both cooled and dehumidified.

Centrifugal fans take the air from the central unit and force it through ducts which pass through a metal shaft in the center of the building and open out into the various rooms. Grilles are placed on side walls close to the ceiling line. This is a complete unit as it will heat, cool, humidify or dehumidify, filter and circulate the air. The installed price of this system was \$2,300.

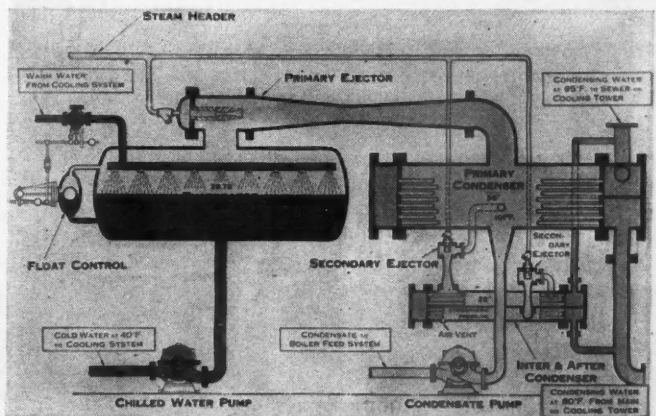
W. & J. SLOANE HOUSE—A complete air conditioning unit is on display but not installed in this house. The living room is cooled by several small units. It is estimated that a complete heating and air conditioning system for such a house as this, including adequate cooling in every room, could not be installed for less than \$3,000.00.

THE ARMCO-FERRO HOUSE—Equipped with what is described as a winter air conditioning unit, which is a gas-fired system which cleans, humidifies, automatically controls the air and supplies forced circulation. The unit consists of two separate compartments. All controls, dry filter, motor and blower are enclosed in one compartment while burners, radiators and humidifying pan are enclosed in the other. It is a compact, attractive unit and completely assembled at the factory. The installed price was about \$800.

THE ROSTONE HOUSE—The equipment consists of a standard round hot air furnace of cast iron boltless construction and an air conditioning unit which filters, washes and humidifies the air. This unit is constructed with a copper mesh filter, two centrifugal fans propelled by a 1/4 H. P. electric motor, and a series of five water sprays to provide necessary humidity in the winter months. If the water is sufficiently cooled in the summer (as in the House of Tomorrow with a \$1,200 cooling unit) it will dehumidify and cool the air.

An eliminator is used in the air conditioner to remove particles of bacteria, pollen, dust and dirt by means of water contact on a zigzag surface.

This home is without a basement, as all the Fair



This novel cooler on display at the Fair will chill water as low as 35 degrees, and operates by using ordinary tap water and steam. Steam introduced through a Venturi tube produces a vacuum of 29.75" mercury in the evaporator chamber. Water to be cooled is introduced into the evaporator in the form of a fine spray where almost instantaneous evaporation or "flashing" takes place. In doing so, it absorbs its heat of vaporization from the remaining water, chilling it.

houses are, so the heating and air conditioning equipment is placed on the first floor in a special room. Overhead heating is used, the grilles being located on the side walls of the various rooms immediately below the ceiling level. Grilles are attractive and inconspicuous.

Installations in the Lumber Industry's house, the John C. B. Moore house and the Crossett Cape Cod cottage

(Continued to page 50)

Large Panel Units Outstanding Advance at the Fair

THE surprisingly low cost of the exposition buildings at A Century of Progress—15 cents per cubic foot—has been credited by the engineers in charge of this work to the use of large panel units for wall, floor and roof construction. These panels consisting of transite, sheet metal, gypsum board and plywood, proved to be ideally adapted to rapid construction. Attached to the light steel framework for the larger structures and to stud frames for the concession buildings, the use of these panels made for quick, satisfactory enclosure of the space.

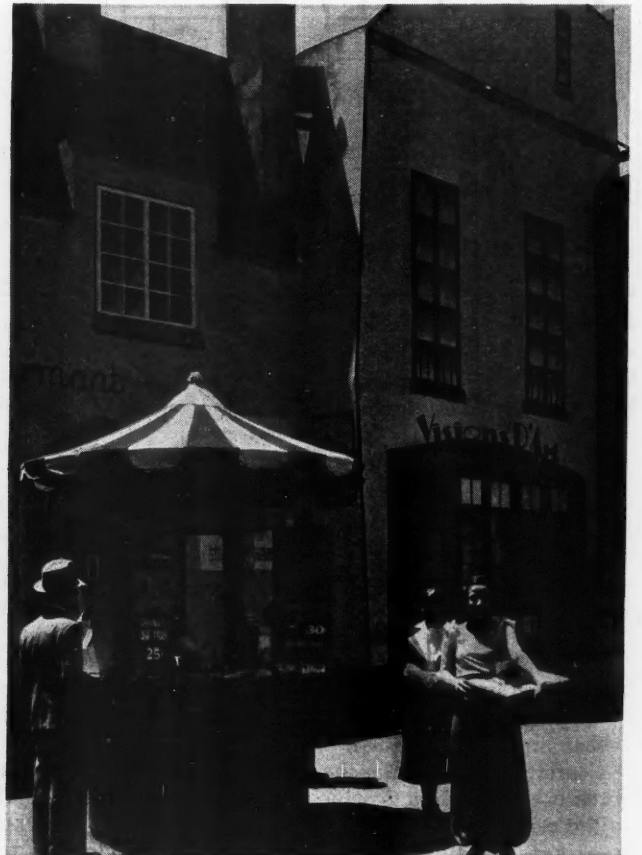
The flat surfaces which characterize the Exposition architecture were most easily created by the use of these large, strong, factory-made panels. Although these buildings are for temporary use, the extreme wear and tear to which they are subjected at the Fair is providing an interesting test of this type of construction for more permanent structures. A detailed examination of these panel materials shows them "standing up" remarkably well.

The use of plywood for wall and partition construction was supplemented at the Fair by thousands of square feet of floor and roof construction. Large sheets of laminated lumber $\frac{5}{8}$ inch thick serve as flooring in the exposition halls, supported by light steel joists. Over this plywood was laid linoleum or asphalt plank tile for

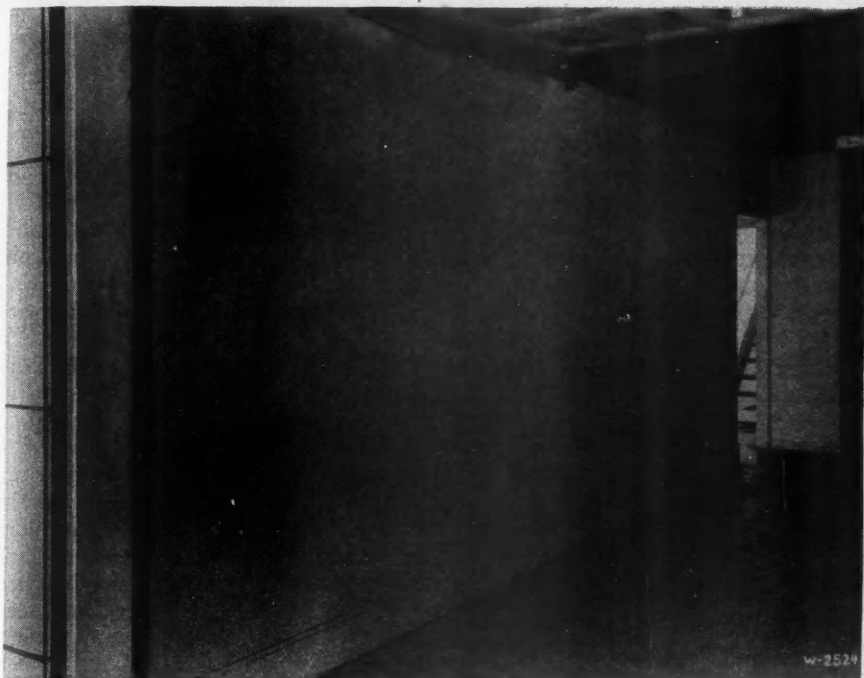
the public corridors and terraces, while in the individual display spaces terrazzo, quarry tile, hardwood pattern flooring and any other desired finish was installed.

For rapid work on the various concessions as the opening day approached, extra large wood panels known as phemaloid compound lumber came into play. For instance, in the last three weeks before the opening, the "Streets of Paris" concession was conceived of, planned and rushed through to completion, constructed as scene painters produced their sets, yet strong and durable enough to withstand outside weather conditions and severe wear and tear. The architects, Holabird & Root, planned an exact replica of that section of Paris where artists and models flourish, and N. J. Wagner, general contractor, undertook to produce the maze of streets and buildings in three weeks' time. The street fronts were painted on by the Pausback Scenery Co., which used over 52,000 square feet of phemaloid for this purpose. As this compound lumber comes in extra large sheets up to 10 x 30 feet, it was possible to paint on the entire street effect or building facade, cutting out the door and window openings and erecting the entire front in this interesting paneled way.

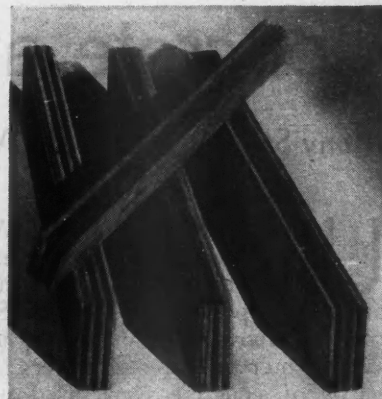
The development of these panels "as high as a house" and 10 feet wide, so that an entire wall can be made up of three panels, opens a whole vista of uses which the



"Streets of Paris," most popular concession at the Progress World's Fair, designed by Holabird & Root, architects, and constructed by N. J. Wagner, contractor, demonstrates possibilities of giant phemaloid panel construction for quick results at low cost. Entire street front painted by Pausback Scenery Co.



The garage of the Stran-Steel house is lined with a single sheet of phemaloid 8 x 20 feet nailed to the steel studs. The Overhead door track is seen to left, back of door casing.



Above, samples of phemaloid after 18 cycles of alternate boiling and drying. To right, 90 minutes with a blow torch merely charred the exterior of the fire-proofed phemaloid.



average contractor or builder can make of this material so dramatically demonstrated at A Century of Progress.

Because of the waterproof character of this material, it will stand up indefinitely for such outdoor uses as billboards, signs, siding and roofing for houses, summer cottages and farm buildings, besides all the indoor uses for which carpenters and builders have regularly used wallboard or plywood. For automobile and truck bodies, cabinet work, floors and ceilings and a host of miscellaneous uses, the easy-working quality, strength and stability of the material commend it to builders and lumber dealers.

The millions of people milling through the Century of Progress buildings—and most of them go through the "Streets of Paris"—are giving these materials an "accelerated wear test" which probably is packing ten to fifteen years of ordinary wear and tear into five short months. In the same way, phemaloid has been submitted to an "accelerated weathering test" equivalent to many years of actual service, the results of this test being shown in one of the accompanying photographs. These four cross sections of the compound lumber were put through alternate cycles of boiling for 50 minutes and forced drying at 300 degrees Fahrenheit for 25 minutes. At the end of 18 of these cycles, the phemaloid samples were

still intact as shown. The resin adhesive used in the manufacture of this compound lumber appears to be absolutely immune to moisture.

Another interesting feature of this material is that it can be made highly fire-resistant by the use of a specially treated incombustible ply placed directly beneath the face veneer. Consequently, when flame attacks the panel, only the thin veneer face is exposed. The fire test illustrated shows how well the fire-resistant phemaloid withstood a 90-minute attack by a gas torch flame. The base was scorched but the panel itself was untouched and the temperature on the "cool" side of the panel was only 435 degrees.

Such notable tests of new materials at A Century of Progress no doubt explain the keen business interest which builders, architects and dealers are taking in this exposition.



One-inch panels of Colotex insulation used under Macottaglasiron panels for exterior insulation and surfacing of the Stran-Steel Good Housekeeping exhibition house at A Century of Progress

Concrete at A Century of Progress

Many Striking Uses Point Way Toward Construction of Future

USES of concrete at the World's Fair are widespread and interesting. One of the most spectacular is the construction of the huge foundations and anchors supporting the gigantic Sky Ride, which towers 628 feet above the ground and has a span of 1,850 feet from center to center of towers. More than 4,000 cubic yards of concrete were used in the foundations and anchors.

Visitors to the Horticultural exhibit are intrigued by the concrete pools which beautify the grounds. Another concrete feature that attracts much attention is the colorful terrazzo approach to the Chicago Planetarium. This esplanade was installed as an exhibit of the National Terrazzo and Mosaic Association. The central unit consists of 12 panels of rich design, symbolic of the months, blended in nearly 50 color tones. It is a striking illustration of the positive color values possible in modern concrete work.

Construction of a private auditorium in the General Motors Building illustrates another use of concrete that



AUDITORIUM of the General Motors Building showing use of 8x8x16-inch light weight concrete masonry units laid on end to form interior walls. Vertical and horizontal mortar joints are continuous. A finish of buff portland cement paint was given.

AT RIGHT is shown detail of stair well construction with concrete masonry units laid on end. The 4-inch wall is economical and produces an attractive finish.

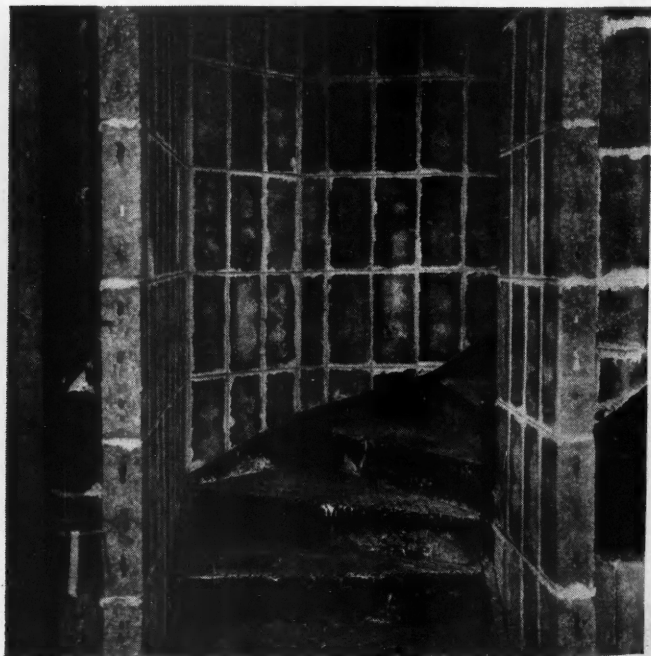
points the way towards improved modern construction. This was the adaptation of a standard 8x8x16-inch concrete masonry unit for use as the finished interior wall of the auditorium. The blocks were laid on end with vertical and horizontal mortar joints continuous.

This ashlar wall is constructed of light weight concrete units. The 4-inch walls are strong, inexpensive and occupy little space. The same units were used in constructing stair wells in the building.

An outstanding advantage of this concrete auditorium wall is the acoustical deadening effect achieved by the surface of the block. Its porous surface absorbs and does not reflect sound. The masonry was given a coat of buff colored portland cement paint. Trimming was carried out in orange and blue and the colorful effect produced was striking and attractive. The architect was Albert Kahn of Detroit, and the builder, the Lundoff-Bicknell Company, Chicago.

Other uses of concrete throughout the Fair were in many cases less striking but worthy of note. Concrete floors and decks were laid in the construction of the Stran-Steel house in the Housing Exhibit. The steel frame further reinforced by concrete floors throughout provided a rigid, permanent, firesafe construction that has been widely praised by builders and the public.

One of the lasting effects of the Fair predicted by students of architecture and building is that there will be a tendency, as a result of the World's Fair architecture, towards use of more simple, flat areas and unbroken masses, as exemplified in the buildings. Concrete engineers have pointed out the practicability of concrete for this type of construction and predict that there will be a large increase in work of this type. The monolithic concrete structure, as well as that of concrete masonry, is very well suited for the modern type of architecture where the exterior expresses the structural nature of the building.

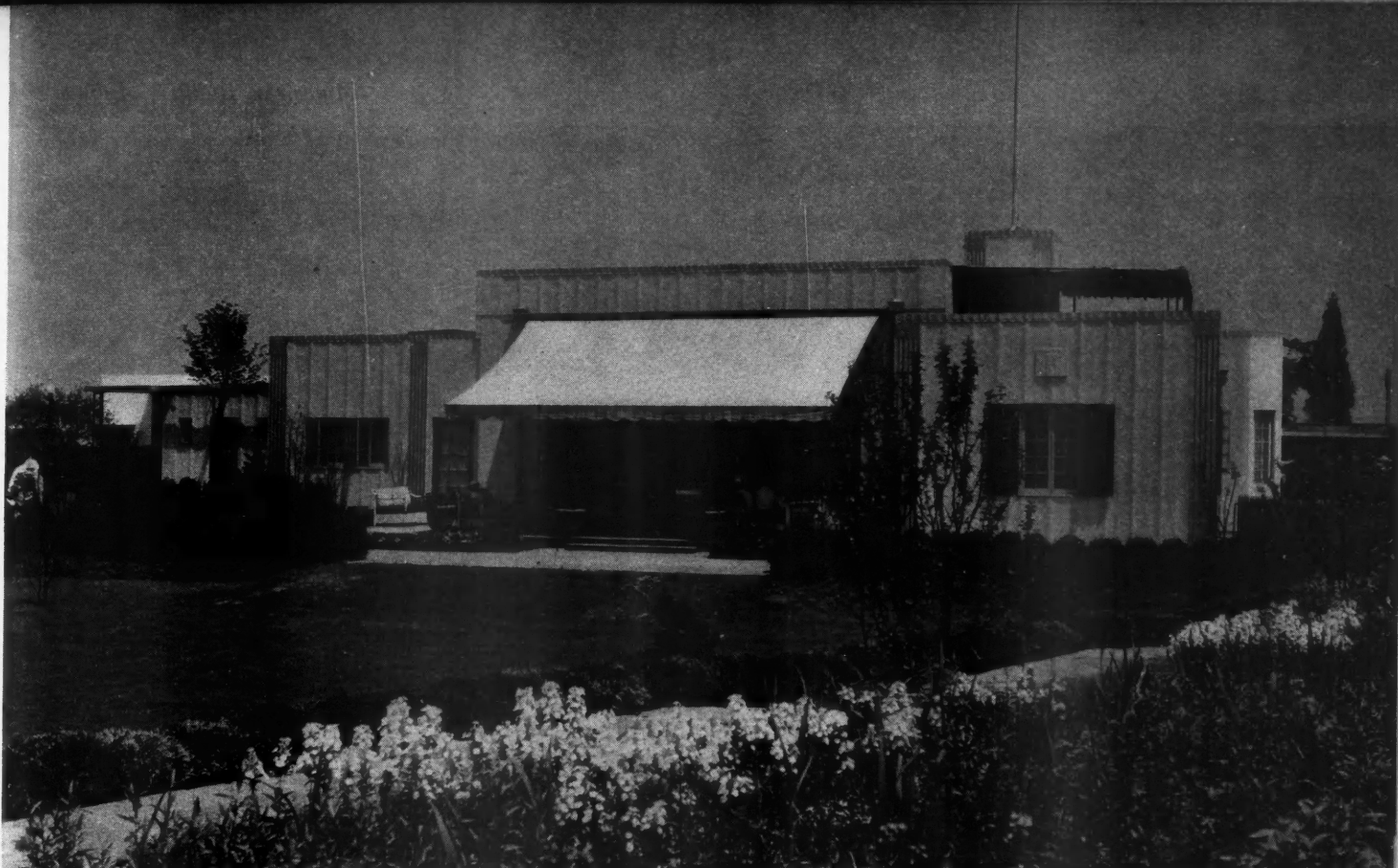


on.
on-
all
ith
on-
ive:
in

um
the
oes
uff
ied
ed
ert
ell

in
ete
he
eel
out
nat

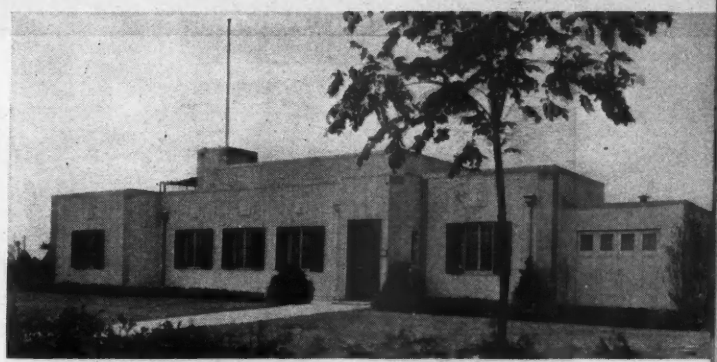
tu-
e a
re,
en
ete
will
nic
ry,
are
he



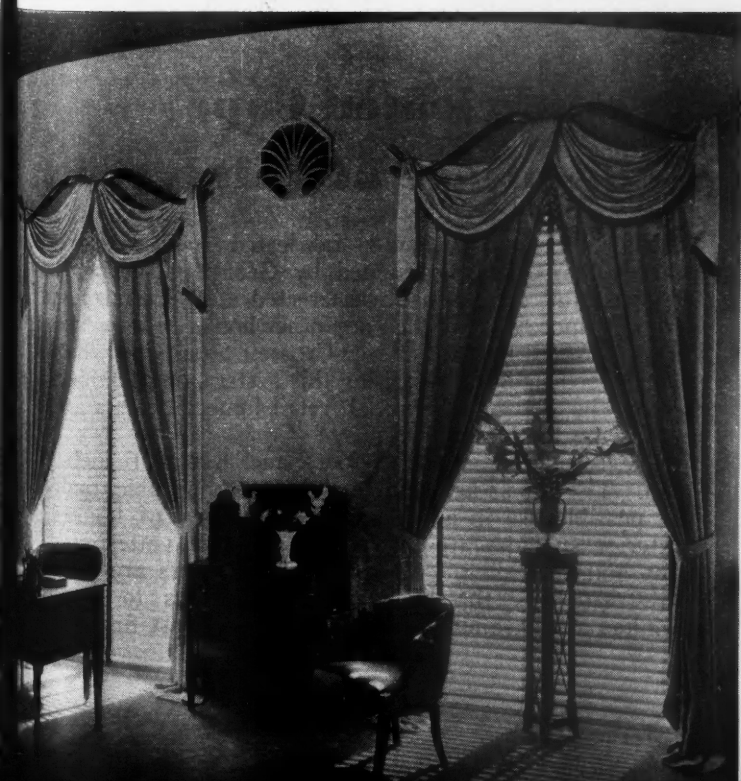
Photos by Kaufmann-Fabry

In the Modern Manner

The World's Fair home shown on this page is charmingly modern and is worthy of careful study. On the following pages are other modern homes, but not all in the fashion popularized at the World's Fair. They are, however, thoroughly up to date in their design and construction and represent the best current architectural practice.



THE W. & J. SLOANE HOUSE at the Fair pictured on this page is an all-wood structure of unusual but interesting design. The garden view at top shows an extremely pleasant terrace and porch. The use of wide vertical boards for the exterior is unique and striking. The arched ceiling, attractive warm-air grilles, French windows with venetian blinds give charm to the living room. The architects were Corbett, Harrison & MacMurray, New York; builder, the Sill Construction Co., Chicago.

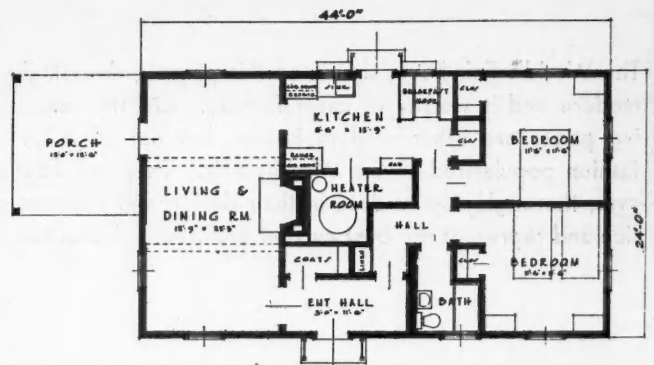




A. S. DAVIS, Architect.



THE ENTRANCE HALL is paneled with Arkansas soft pine given a dark oil treatment which produces a simple and attractive Colonial interior. The house has been passed through by thousands of visitors at the Fair who express appreciation of the attractive design. The heater room is located on the first floor off the kitchen as there is no basement.



Cost Key is 1.289-136-1056-44.3-15-17

Pre-fabricated Cape Cod Cottage at Fair

USING a system of factory-fabricated panels and pre-cut lumber units designed by George G. Roberts, engineer, this little house was erected at A Century of Progress more quickly than any other house on the place. It is sponsored by the Fordyce-Crossett Sales Co., which plans to sell small homes, using this system, on a national scale to be distributed through retail lumber dealers and erected by local builders.

The basic unit is a four-foot panel 8 feet, 6 inches high. The panels are flexible and interchangeable, making possible use in a wide variety of types of houses. Exterior surfaces are finished in different patterns of drop and lap siding. All structural members are pressure-treated by the Wolman Salts process to resist termites, decay, and provide resistance against fire.




THE COLONIAL INTERIOR of the living room is charming and friendly with its vertical pine paneling and beamed ceiling. Cost of this house with standard equipment in the Chicago area is estimated by engineer Roberts at \$3,900 complete.

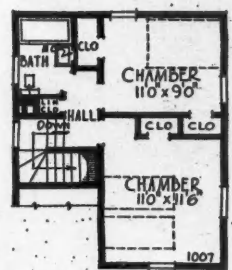
RAPID CONSTRUCTION is made possible by the pre-fabricated units. Framing may be performed in 24 hours, using 4 or 5 men, and the structure completed in 8 days, according to Mr. Roberts.

A MODERN KITCHEN with attractive and convenient cabinets is an especially fine feature of the house. The metal sink and drainboard, covered linoleum floors, electric refrigerator are important items.



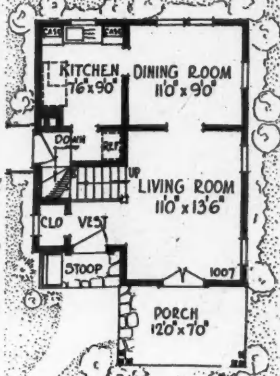


1007-C




CUBAGE
House 11350 Cu.Ft.
Porch 400 - -
Total 11750 Cu.Ft.

Second Floor



First Floor




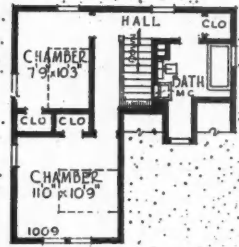
Vestibule And Stair

FROM NEW ENGLAND


This type of Colonial design has through long years proved to be one of the most satisfactory yet devised for the small dwelling.

DIMENSIONS
Size Of Main Building 20'0" x 24'0". Size Over All 21'0" x 32'0".
Ceiling Height 1st. Floor 8'2". Ceiling Height 2nd. Floor 8'0".
Ceiling Height Basement 7'0".

National Plan Service Design No. 1007-C. Cost Key is 1.092-88-448-20-15-8

Second Floor

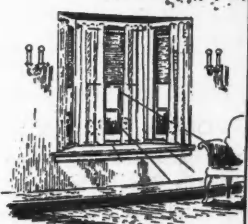


First Floor

HOUSE WITH GARAGE

The style is purely American with details from our own Colonial Period. Even with the garage the house is not large.

DIMENSIONS
Size Of Main Building 24'0" x 24'0". Size Over All 34'0" x 29'0".
Ceiling Height 1st. Floor 8'2". Ceiling Height 2nd. Floor 7'8".
Ceiling Height Basement 7'0". Total Cubage 14500 Cubic Ft.

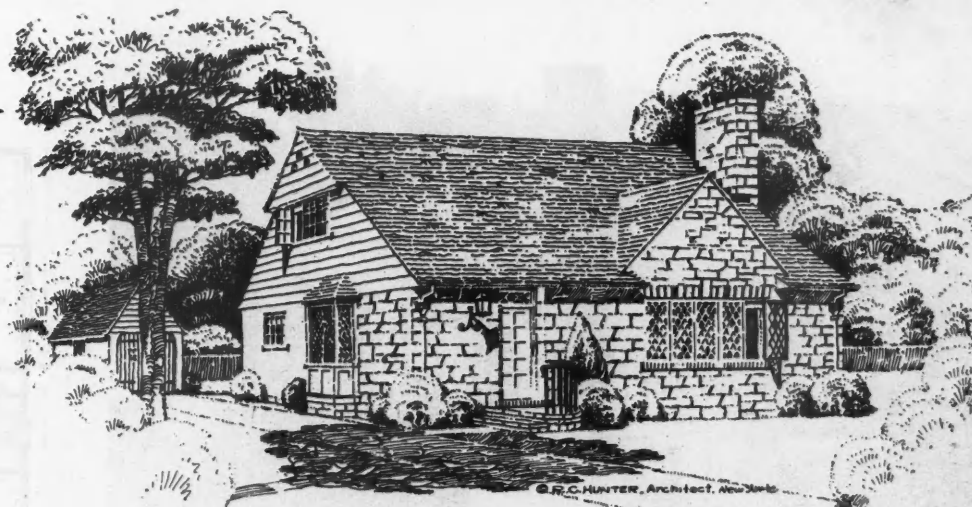


Bay Window

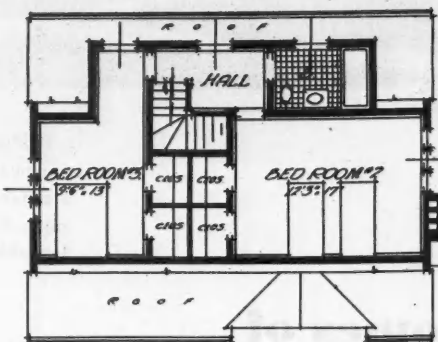
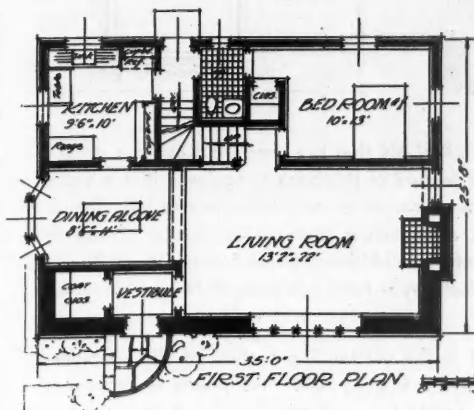
National Plan Service Design No. 1009-C. Cost Key is 1.319-115-480-22-20-11

Small But Attractive

R. C. HUNTER
Architect
New York City



© R. C. HUNTER, Architect, New York



SIDING AND STONE make this small home attractive and out of the ordinary. The floor plan provides a splendid large living-room, a dining alcove with bay window, and down-stairs bedroom. Finishing of second floor can be done at a later time. Cost Key is 1.467-122-900-39-17-13.

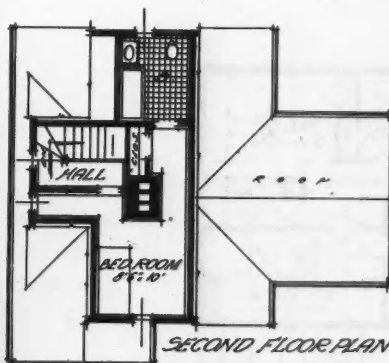
FIRST FLOOR PLAN

SECOND FLOOR PLAN

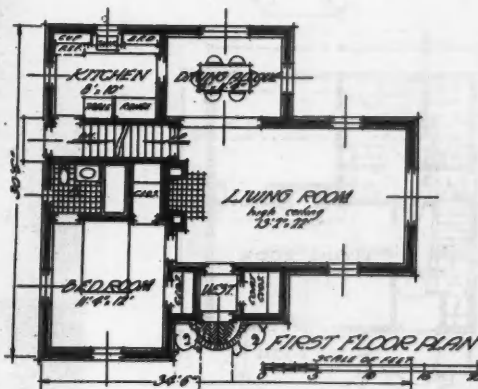


© R. C. HUNTER, Architect, New York

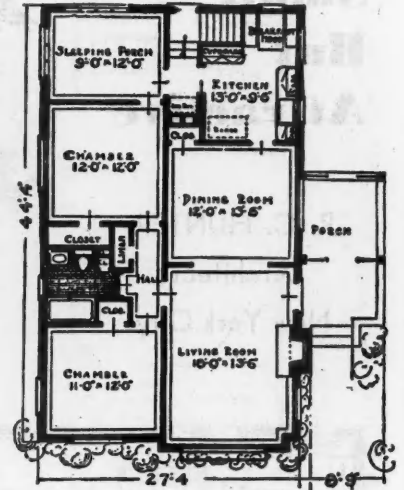
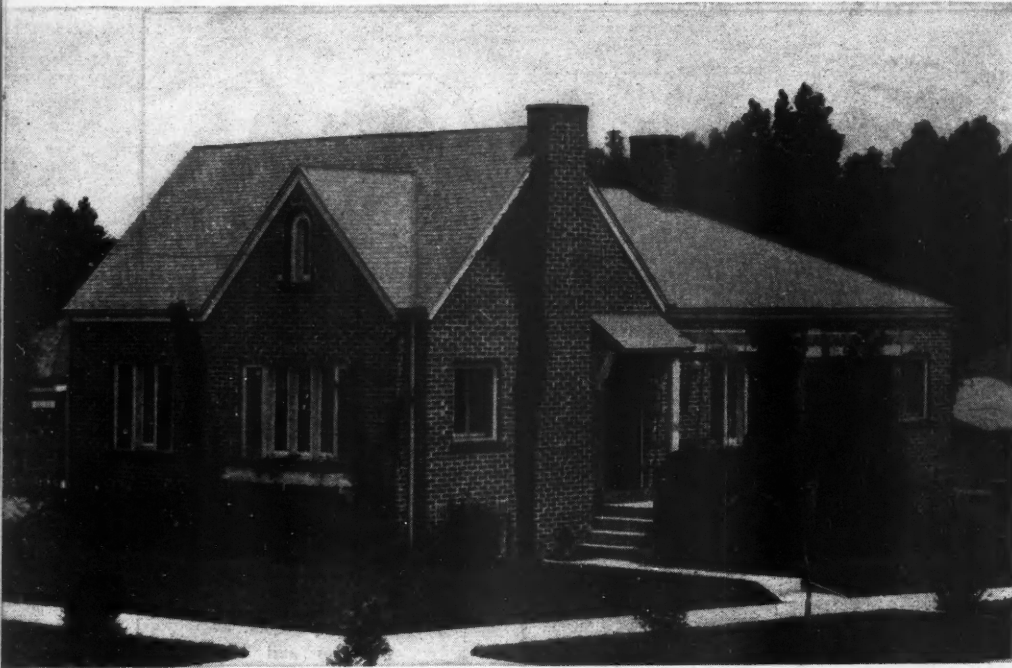
ANOTHER SMALL HOME is shown here in which the exterior of wide siding or shingles combined with stucco or stone gives an appearance of size and quality. Dimensions are only 34' 6" by 30' 6", yet the house looks much larger. The floor plan is featured by the high ceiled living-room, with its fine array of windows. Cost Key is 1.354-130-728-32-17-12.



SECOND FLOOR PLAN



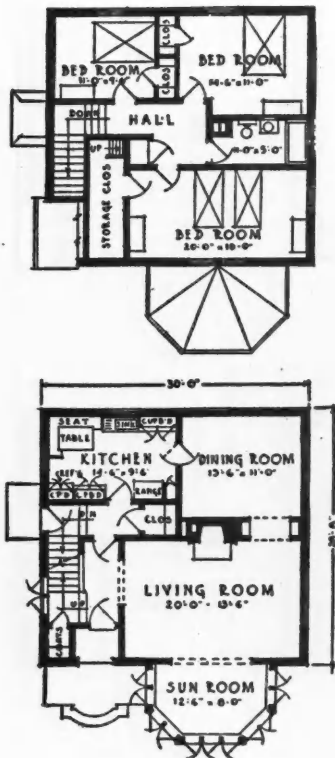
FIRST FLOOR PLAN

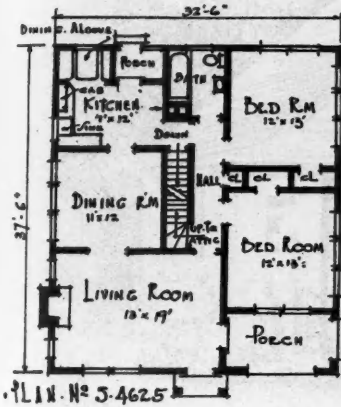


A POPULAR FLOOR-PLAN that has been tried out in a great many communities is the feature of this brick bungalow. It is a house that is suitable for either a corner lot or a fairly narrow lot. The dining-room, living-room arrangement gives an impression of size that is desirable. Architects' Small House Service Bureau Design No. 6-B-19. Cost Key is 1.371-146-1212-50-16-16.

Two Brick Homes of Practical Construction

THE SUN-ROOM is the outstanding feature of this six-room brick home although there are many other fine points to recommend it. The house has a substantial, well-built look that appeals to many people, and while it is not a large house it has good living facilities. All rooms have cross ventilation, the recessed entrance is attractive. The hall arrangement appeals to many people. Architects' Small House Service Bureau Design No. 6-A-58. Cost Key is 1.617-134-964-42-24-16.

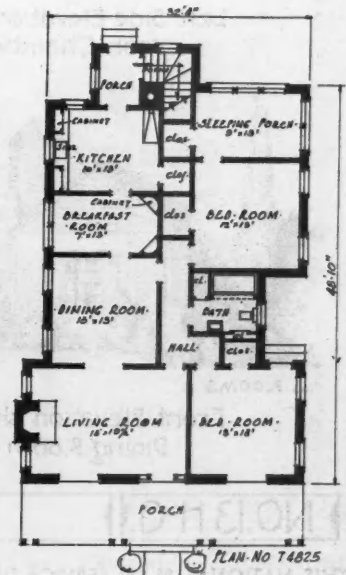




WHITE SHINGLES give this bungalow a look that is reminiscent of Colonial. The open porch at the right is an unusual but pleasant feature, especially for hot climates. The floor plan is a standard arrangement which is practical and livable, with two good-sized bedrooms and a 13 x 19 foot living-room. It would be easy to add other sleeping quarters up-stairs. Design by R. M. Williamson. Cost key is 1.410-140-1132-48-18-16.

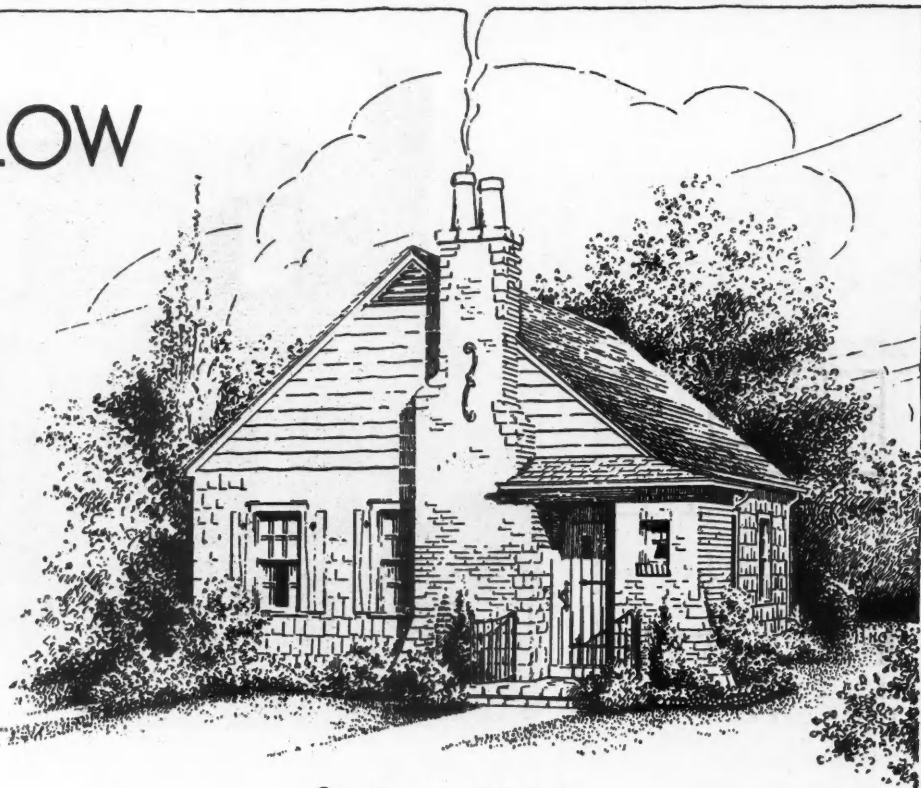
Bungalows From the Southwest

THE IMPOSING COLONIAL FRONT on this house gives the entire structure a dignity and a quality appearance not usually to be found in a bungalow with this floor arrangement. The large French doors with shutters are attractive, and the central Colonial entrance is especially good. The rear sleeping porch is a popular feature. Design by R. M. Williamson. Cost key is 1.871-182-1564-64-20-25.



BUNGALOW

While appeal to the pocket-book was the dominating factor in planning this effective bungalow, economy and compactness have not been achieved at the expense of efficiency and all the little refinements and details which make up the home. Originating with three rooms, bath and a convenient bed closet, it provides for two well appointed future rooms as shown on floor plans.

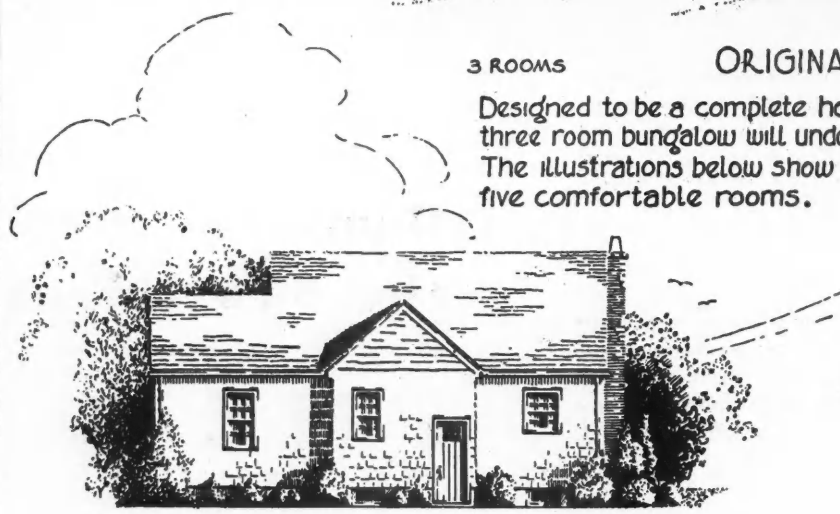


3 ROOMS

ORIGINAL HOME

SIZE 22'0" x 28'0"

Designed to be a complete home in itself, this charming three room bungalow will undoubtedly meet genuine approval. The illustrations below show how this home can grow into five comfortable rooms.



4 ROOMS

SIZE 22'0" x 38'6"

Left Side Elevation showing future rear Chamber addition.



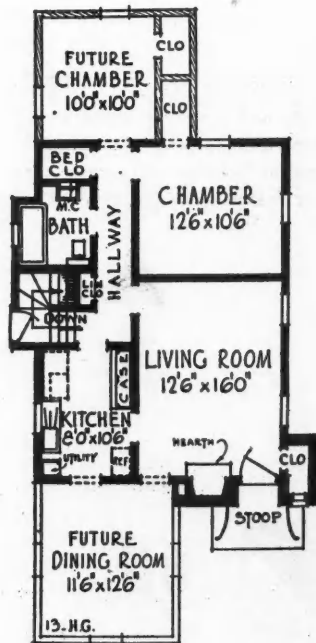
5 ROOMS

SIZE 22'0" x 51'6"

Front Elevation showing future Dining Room addition.

CUBIC CONTENTS

ORIGINAL HOME	12000 CU. FT.
FUTURE REAR CHAMBER	1760 CU. FT.
FUTURE DINING ROOM	1950 CU. FT.
TOTAL	15710 CU. FT.



FLOOR PLAN

KEY

- WALLS OF ORIGINAL PLAN
- WALLS OF FUTURE CHAMBER
- WALLS OF FUTURE DINING ROOM

NO. 13 H-G.

HOMES THAT GROW

N.P.S.

THIS NATIONAL PLAN SERVICE DESIGN, No. 13-H-G, is a very charming three-room cottage which may be increased to five. Cost Key of original house (3 rooms) is .816-114-651-28-13-10. With first addition (4 room house), Cost Key is .988-135-798-34-15-12. For full size house (5 rooms) the Cost Key is 1.149-161-960-40-18-14. These costs are for complete houses at time of building. Where additions are made later on, extra labor cost must be figured.

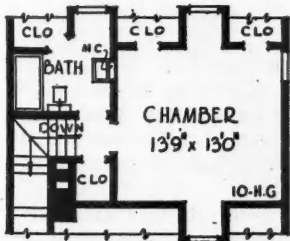


COLONIAL

The style is purely American with details from our own Colonial period...a style that has a certain simplicity much admired. Throughout its entire growth...from the first attractive four room cottage to the completed six room home and garage, the architectural features have been harmoniously carried out. Designed to meet all the requirements of present and future finance and the growing family.

4 ROOMS ORIGINAL HOME SIZE 23'6"X22'0"

This charming four room cottage is a complete home with all comforts and conveniences. Especially planned for future expansion as illustrated below.



SECOND FLOOR PLAN

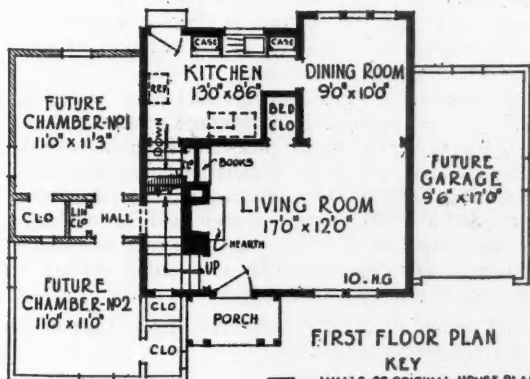
CUBIC CONTENTS

ORIGINAL HOME	13350 CU.FT.
FUTURE ADDITION No.1.	3250 CU.FT.
FUTURE ADDITION No.2.	2880 CU.FT.
GARAGE.....	1600 CU.FT.
TOTAL	21080 CU.FT.



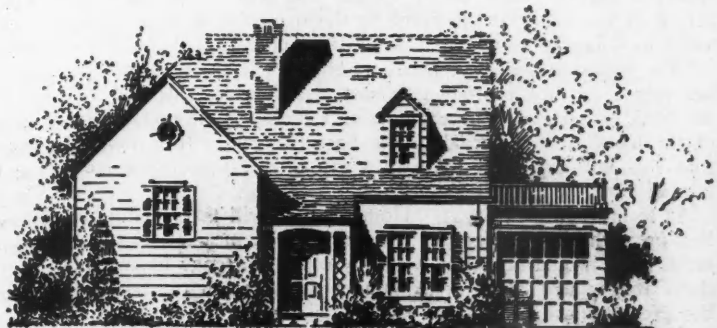
5 ROOMS SIZE 35'0"X22'0"

Illustrating home complete with Addition No.2.



FIRST FLOOR PLAN

KEY
 --- WALLS OF ORIGINAL HOUSE PLAN
 --- WALLS OF FUTURE CHAMBER-NO1
 --- WALLS OF GARAGE AND FUTURE CHAMBER-NO2



6 ROOMS SIZE 45'0"X29'0"

Illustrating home complete with Addition No.3 and Garage.

N.P.S. HOMES THAT GROW NO. 10-H.G.

ANOTHER HOUSE BUILT so that it may grow. It starts out as a four-room Colonial, but is planned for the addition of two bedrooms and a garage. National Plan Service Design No. 10-H-G. Cost Key of original (4 rooms) is .991-94-527-23-13-9. With first addition (5 room house) Cost Key is 1.229-117-723-31-14-12. For full size house (6 rooms) the Cost Key is 1.575-151-869-37-19-16. These costs are for complete houses at time of building. Where additions are made later on extra labor cost must be figured.

Federal Mortgage Aid Outlined

Branch Managers Named, Loan Policies Told As Home Financing Machine Gets Into Action

APPRAISAL policy to be followed in administering the new Home Owners Loan Corporation, as so far disclosed, is of great interest as indicating coming developments in financing. Excerpts from recent statements by authorities, as noted by the National Association of Real Estate Boards, are given below.

Name State Managers

State managers for the Home Owners Loan Corporation, chief appraisers for the states and state headquarters, so far announced, are listed below. A local attorney and appraiser, working on a fee basis, will be appointed for each county where the demand warrants such action. In large and populous counties assistant managers and general appraisers and council are expected to be necessary.

Applications for refinancing home mortgages must be sent to state managers in each case. Applications will be referred by the state managers to the local attorneys and appraisers. After approval by the local agent, the loan must be approved by the state manager, then sent to the central office of the corporation for final approval or rejection.

It is estimated by officials of the Home Loan Bank Board, which administers the Home Owners Loan Corporation Act, that exchanges to the extent of one or two billion dollars will take place under the Act. The volume of distressed home mortgages that will be refinanced under the new laws has been estimated at 5 to 10 per cent of the outstanding total of twenty-one billion dollars of home mortgages.

(Number of urban homes in the United States: estimated at 12,000,000. Of these about $\frac{1}{2}$ have mortgages outstanding against them, the Board estimates. About $\frac{2}{3}$ to $\frac{3}{4}$ of mortgaged homes are believed to fall within the limitations of the Act, i. e., homes having a value of \$20,000 or less, built to house not more than four families.)

Appraisal Policy on Home Loans

As to appraisal policy of the new Corporation, Horace Russell, general counsel of the Federal Home Loan Bank Board and of the Home Owners Loan Corporation, makes this statement (United States News, July 1 to 8):

"The appraisals made by the Corporation will not be of the technical market value of the house, but will be an effort to arrive at the value of the home to the owner as a home or its value to a family to whom it would be suited as a home.

"The appraiser will give equal weight to (1) the present market value; (2) the reproduction cost less depreciation; and (3) the value as arrived at by capitalizing the reasonable rental value of the home over a period of the past 10 years. It is thought that this will arrive at the fair worth of the property as contrasted with the market value."

As to procedure he says: "Home owners will take their problem up with the manager of the Corporation nearest him very much as he would negotiate with any other mortgage lender, and the manager will assist in explaining the value of the bonds to the present mortgage lender. The Corporation is not concerned with who is the holder of the outstanding mortgage and will deal with all home owners directly alike, whether they have borrowed their money from insurance companies, mortgage companies, banks, building and loan associations or individuals. In order to be able to finance up to 80 per cent of the value, however, it will be necessary for the present holder of the mortgage to take the bonds of the Corporation."

Regulations governing loans from the Home Owners Loan Corporation are given in Form 7 just issued by the Corporation. *Final Appraisal*: to be fixed by the manager. Is not to exceed that of the paid appraiser by more than 10 per cent. May be finally readjusted by the Corporation in Washington.

Of importance in the working out of loan policies: Each state manager is to recommend three outstanding citizens to be appointed by the Board as a state advisory committee to serve without compensation and without financial responsibility. Duty of the advisory committee: "To observe the operation of the office of the corporation and to make such inquiry as to them may appear to be appropriate as to the operation of the offices of any assistant manager." It is to have before it complete file of all transactions closed the previous week.

A regional advisory committee for each county is authorized "where necessary."

Proposed Federal Savings Associations

Indication that the formation of Federal savings and loan associations will be pushed by the new Corporation is given in a further statement by its general counsel.

"Several hundred such associations should be organized in the next few months which would attract many thousands of savers and investors, thereby bringing in the aggregate very large amounts of money which is made available exclusively for the financing of American homes," Mr. Russell says. (United States News, July 3 to 15.)

"There are more than 1,500 counties in the United States with no kind of an institution whatsoever now lending money on homes or promising to do so in the future.

"The Federal Home Loan Bank Board has responsibility for making the rules and regulations for the organization, operation and supervision of Federal building and loan associations, and has already employed a director of field service and will employ other organizers to go throughout the United States and assist citizens in organizing such associations to develop new money for home mortgage loans.

"The whole home mortgage problem is a serious problem and must be solved. To do so every effort must be made in all directions. Home Owners' Loan Corporation can clean up the grief. The Federal Home Loan Bank System can expand the resources of existing institutions, but not enough in some areas of the country to provide adequate funds.

"Individuals must save to succeed. If they save new money in Federal savings and loan associations, every dollar of that money will be put into immediate constructive use, resulting in employment and the promotion of trade, and Federal funds will accompany those dollars in the same channels and Federal Home Loan Bank funds will follow them. The housing of the American people will have a real part in the recovery of 1933, as it must have for recovery to succeed.

"If one thousand Federal savings and loan associations are organized and they accumulate an average of \$200,000 each, one-half from the Government and one-half from individual savers and investors, and then these associations discount their mortgages with the Federal Home Loan Bank and loan the funds, more than \$200,000,000 of new money will be made available through this means for the financing of homes and the program will continue to pour approximately one million dollars a month into new home financing indefinitely."

Essential details of the Home Owners Loan Corporation plan as stated from official sources:

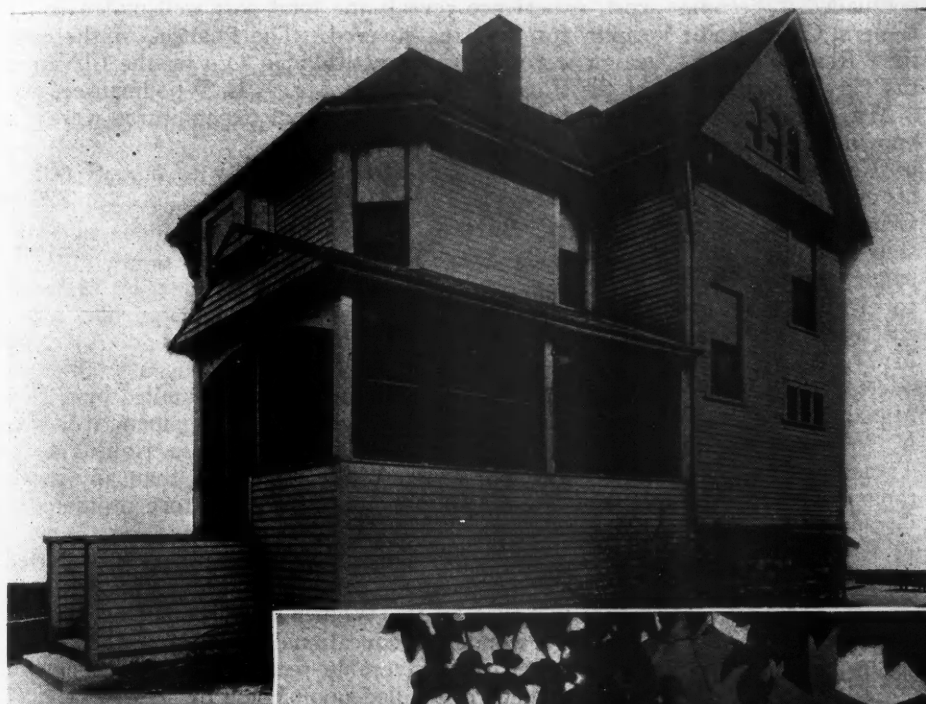
1. Principal method of refinancing to be used: Exchange of bonds of the Home Owners Loan Corporation for distress mortgages. (Interest of 4 per cent on the bonds guaranteed by the Government for the life of the bond.)

2. Refinancing of mortgages through cash loans is permitted where the mortgage covers not more than 40 per cent of the appraised value of the property. These mortgages will bear 6 per cent interest. (A total capital of \$200,000,000 is given for this kind of refinancing.)

(Continued to page 57)

MODERNIZATION

"which makes buildings of all kinds more cheerful, more livable and more salable"



AT the left is shown an Oak Park, Ill., residence "before" modernization; below, you see how this same house looks today, "after" treatment by architect Allen E. Erickson.

This is a good example of the wonders that can be accomplished through the intelligent use of modern materials and good craftsmanship.



● Apartment, Rural and Commercial Buildings ●
Individual Homes ● Community Campaigns

KANSAS CITY AREA PLEDGES \$

THE word "Renovize" was first introduced in Kansas City by Mr. A. C. Everham, President of the Builders' Association, early in 1933. Temporary committees were established and the entire "Renovize" idea studied, until Mr. Joseph F. Porter, Jr., Assistant to the



JOSEPH F. PORTER, Jr.,
General Chairman

President; Kansas City Power & Light Company, could be persuaded to become General Chairman of the "Renovize Kansas City" drive.

Mr. Porter is well known and respected in Kansas City and his acceptance of the General Chairmanship for the campaign augured well for its success. At an early meeting, Mr. J. G. Galvin was selected as Operating Manager and Mr. J. E. Woodmansee as Treasurer, with arrangements made for Campaign Head-

quarters in the Chamber of Commerce offices. Organization work started almost at once, with the goal set at \$4,000,000 in pledges.

Cost of Campaign

Although it was not known in the beginning exactly how much the "Renovize Kansas City" campaign would cost, experience reveals the total cost well under 2c per capita for the area covered. The finances of the campaign were handled practically *in toto* by the Chairman of the Finance Committee, Mr. J. E. Woodmansee, who also acted as Treasurer. Actual expenditures were:

Postage	\$ 264.58	Publicity	\$ 605.46
Telephone	41.95	Salaries	826.50
Speakers' Bureau	75.00	Exhibit	20.00
Letterheads	80.95	Misc.	419.15
Printing	1,823.90		\$4,157.44

Interesting Publicity Features

All publicity for the campaign was handled by a Publicity Committee of practical advertising men; it is generally acknowledged that the "Renovize Kansas City" drive was more successfully publicized than any movement of a similar civic nature ever before promoted in Kansas City.

One week before active solicitation for pledges started, circulars describing the campaign were distributed from house to house by the Women's Division; this gave the campaign wonderful educational publicity to the citizens and resulted in a favorable reception of the pledge solicitors when they called upon home owners.

Kansas City newspapers contributed generously of editorial space, the Kansas City Times devoting 5,306 lines, the Kansas City Star 7,588 lines, and the Kansas City Journal-Post 6,594 lines, featuring the progress of the campaign as news. In addition to editorial publicity, the Journal-Post donated three pages and carried approximately 7 pages of paid advertising; and the Star-Times organization donated one page and carried about 12 pages of paid advertising.

Local merchants in every line co-operated by using the

**THE CHAMBER OF COMMERCE
OF KANSAS CITY**
Kansas Missouri
June 20, 1933

Mr. Joseph F. Porter, Jr.
Kansas City Power & Light Company
1820 Baltimore Avenue
Kansas City, Missouri

My dear Joe:

Just as a matter of interest I am enclosing Dun & Bradstreet's report on Kansas City. It speaks for itself. I am also enclosing a copy of what it reported on Omaha, which has had no renovizing campaign as yet. I might also add that Indianapolis showed a twenty per cent reduction in dollar volume on paint. Portland is under its production of a year ago; Baltimore is ten per cent less, etc. A few cities show increases, but none of the reports compare with the report made for Kansas City.

All of which I think should go to the credit of Joseph F. Porter, Jr., because there is certainly no rally here in Dun & Bradstreet.

At a meeting today the statement was definitely made that the renovizing campaign marked the upturn in Kansas City. Wholesale trade generally in May here was the largest in two years. Those are figures - not fancies.

Sincerely yours,
Bill
F. M. Smith
Executive Manager

WMS:H
Enc.

A KANSAS Citian Expresses
His Approval of the "Renovize
Kansas City" Campaign

Collections still are slow, although they are improving with some paint distributing houses.

Kansas City
This is considered a large market for manufacturing and distributing paint of various kinds. The industry fell to the lowest level for years during the first quarter of 1933. However, since then, there has been a better sale. Some of the leading factories report, in fact, that sales for the second quarter exceeded budget estimates.

While raw materials are showing some advance, the price to the consumer has not yet been raised. Retail business is reported as satisfactory, accounted for by a thorough renovizing campaign conducted by civic interests here and many householders doing painting jobs that perhaps they ordinarily would not have done.

Indianapolis
Production and wholesale distribution of paints showed a 20 per cent reduction in dollar volume for the first four months of 1933, against the same period of 1932.

RENOVIZE! COOK'S GREAT RENOVIZING SALE

Renovize with Old American ANNUAL HOUSEHOLD RENOVIZING

Renovizing? A. C. Cooke Coal & Cement Co.

COOK'S PAINT

Decorative Lumber Co.

COOK PAINT & VARNISH CO.

LOCAL Merchants in Every Line Co-operated

\$11,000,000 FOR RENOVIZING

word "Renovize" in their current advertising, even the classified sections showing the effect of the campaign.

By E. L. GILBERT

Fine Work by Committees

Committees operated most efficiently throughout the campaign, the following being worthy of particular note:

Residential Committee: Headquarters were established in each residential area, thus relieving General Headquarters of an enormous amount of clerical work. A total of 55,134 contacts were made in the five residential areas, resulting in 17,092 pledges totaling \$2,486,815.

Business Buildings Committee: Organized primarily to solicit individual owners of the downtown district, this committee reported 4,800 contacts resulting in 1,448 pledges totaling \$4,009,845.

Property Owners' Committee: Contacted and secured pledges on property controlled by realtors, building and loan companies and other agents handling large properties. A total of 650 contacts were reported, accounting for 400 pledges valued at \$1,167,137.

Architectural & Engineering Committee: Organized primarily to give free technical information regarding remodeling, modernization and repair of residential and small business properties. Membership included the leading architects and engineers. Approximately 65 requests were handled by this committee.

Rehabilitation of Blighted Areas Committee: This committee could not report much actual progress during the campaign, due to the length of time required to pro-

RENOVIZE
REPAIR, REMODEL, RESTORE AT TODAY'S
GAVE THIS PAGE FOR FUTURE REFERENCE

Experts estimate that if 4 million dollars in property improvements is invested here now, the circulation of that money will mean 40 million dollars' worth of business to the community.

Think what this means to wage-earners... shop-owners... all citizens!

Renovize Now!

Sewall's Paints & Varnishes
FREE... 25c

ARMSTRONG'S LINOLEUM

RENOVIZE NOW!
RENOVIZING NOW!
RENOVIZING NOW!

RENOVIZE!
Let's make our community a better place to live.

RENOVIZE!
Let us make you in estimating the improvements you desire.

RENOVIZE!
For those with steady income, modest time payments can be arranged.

RENOVIZE!
Let's Talk It Over

A. G. Thompson Lumber Co.

RENOVIZE!
You Always Need HOT WATER To RENOVIZE

Pittsburg Water Heater
For the Whole Family

RENOVIZE!
\$49.50

Before Prices Rise
Renovize
Your Household Equipment, too

OUR RENOVIZING SALE!!
Of Slightly Used Furniture Bargains to Brighten Up Your Home. Prices Low. TERMS EASY!

3-Pc. BEDROOM SUITE
Walnut Finish. Only a Few \$195, \$225, \$275

REFRIGERATORS \$445
RUGS \$4.95 to \$12.95
CHIFFOROBES \$7.95

Lincoln Furniture Co.
JUST EAST OF 16TH AND VINE NA. 222 1625 EAST SEVEN ST.

Kansas City Power & Light
to Pay (Check Carrying Charge)

Renovize
Let Them Renovize Your Insurance New Offices

Woodhead's Insurance Agency

RENOVIZES
Let Them Renovize Your Insurance New Offices

THE ANGEL
Let Them Renovize Your Insurance New Offices

Good Luck

\$15,000.00

RENOVIZING SUPPLIES
PAINTS, PAPER, WALLPAPER, GLASS, MIRRORS, ETC.

GAIN HARDWARE CO.
WALNUT ST. 1515

ANCHOR
BUILDING LOAN ASSOCIATION

Operated by Using the Word "Renovize" in Their Advertising

mote projects of this nature. However, the committee will continue to function under the supervision of the Business Buildings League and the Real Estate Board. This is one activity of the Kansas City drive which may very easily result in tremendously important permanent improvements for the city, eventually playing the leading role in plans for rebuilding slum or blighted areas.

Advisory Committee: The roster of this committee listed 62 leading Kansas Citians, many of whom seldom take an actual part in civic campaigns, but whose names added considerable dignity and prestige to this movement.

Results of the Campaign

As previously mentioned, the goal first contemplated was 4 million dollars in pledges. At the end of the campaign a total of 60,584 contacts had been made by all workers, with a grand total of 18,950 pledges totaling

\$7,666,637, or nearly twice the amount estimated as possible in the beginning.

In addition, similar campaigns were operated concurrently in North Kansas City (pledges totaling \$251,000); Kansas City, Kansas (with pledges amounting to \$2,955,376); Independence, Missouri (pledges of \$315,000); and in the inter-city district between the Eastern limits of Kansas City and the Western limits of Independence (which produced pledges of \$110,000).

The amount pledged for the Kansas City area, therefore, reached the grand total of more than \$11,000,000. Of course, it is not yet possible to estimate how much of this work will be done; however, tentative plans are under way for a check-up to begin about September 1st. Conservative Kansas Citians estimate 60 per cent of the total work pledges was created by the campaign and would not have eventuated within the next twelve months otherwise.



Before



After

Historic Farmhouse Is Modernized

OVER two hundred years ago sturdy citizens of Sussex County, New Jersey, carted fieldstone by the tons, hewed timber from trees cut nearby, and toiled mightily to erect the substantial building pictured above. They planned to have this house on the old Blairstown Road withstand both the ravages of the elements and the attacks of roving bands of Indians; the success of their plans is evidenced by the fact that the house, now flanked by shielding maple trees and reached by a modern concrete road, shelters present-day people.

Only a year or two ago, comparatively, the present owner began to see evidences of the old house's depreciation. Moisture seemed to collect in the thick stone walls. Windows and doors let cold drafts sweep through of a winter's evening, and mosquitoes found easy entrance in summer. The roof started to leak, and there were numerous other troubles, all of which pointed to the need for thorough modernization and repairs.

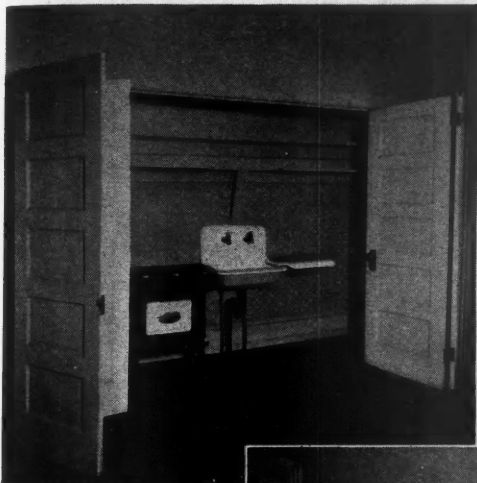
A house of equal size could have been built on the site for but little more than the complete repairs; but there is a famous spring on the place, which is credited as the reason why George Washington bivouacked his army at

this spot for several days. Thus, in addition to being a pleasant old place, "White House Farm," as it has been called for many years, has much local historic value. So the modern owner decided to preserve and modernize the old place.

First, an automatic electric water system was installed, to bring the famous spring water into the house. Next, all loose plaster and cement was removed from the outside walls and replaced by a coat of waterproof stucco which, after thorough drying, was painted white. The leaky roof was replaced with slate, doors and windows repaired, faulty timbers renewed. As a crowning glory, a modern bathroom was installed, including colored wall tile, hot water and heat being furnished to this room by a small coal-burning heater in the cellar.

The modernization of "White House Farm" has provided work for local contractors and craftsmen over a period of two years; other work contemplated will take another year or two. This is one example of the rural modernization work builders in many sections can develop. With the increased price of farm produce of all kinds, farm building improvements should flourish.

Apartment Modernizing Pays!

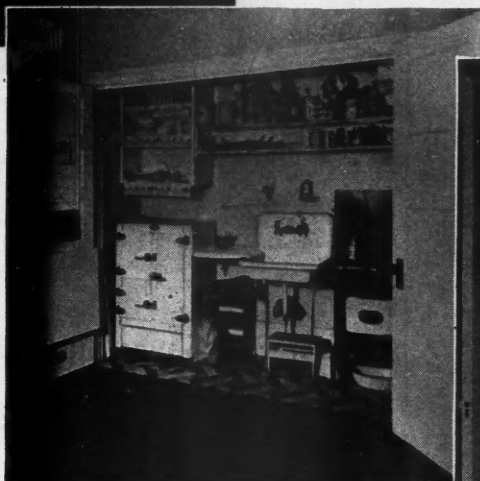


AT LEFT: View of unoccupied old kitchenette in the Homer Apartments, Philadelphia, before modernization.

WHEN the Girard Trust Co. decided to modernize the 12 suites in the Homer Apartments, ten of the apartments were vacant. All 12 kitchenettes were modernized by installing new cabinets, monel metal sinks, ranges, wall tiling, etc.; the cost per kitchenette averaged \$273. In addition, new hardwood floors were laid and some tile installed in bathrooms. After the Frank C. Snedaker Co. (Philadelphia) completed the work the building was re-named Penn-Lynn Apartments.

Before modernization ten apartments were vacant, only two being occupied. Modernization in this case resulted in the renting of all apartments, changing this property from a losing proposition into a money maker.

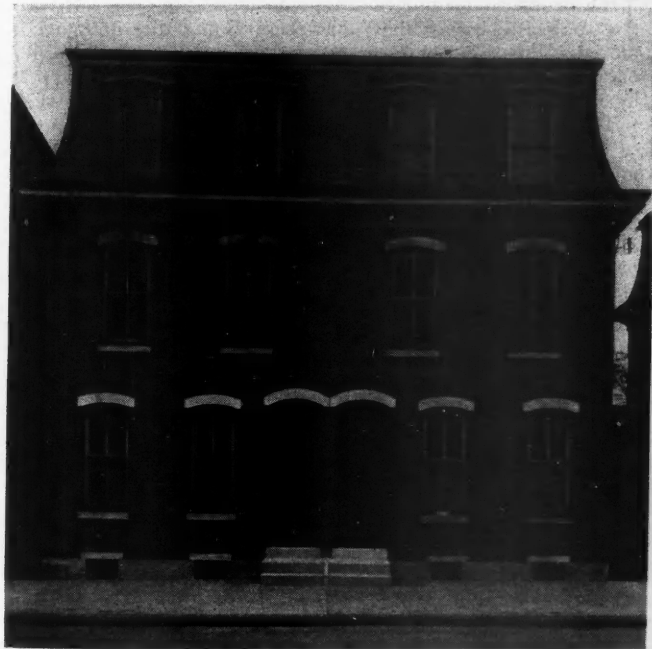
The photographs on this page were obtained through the courtesy of the International Nickel Co., Inc., makers of monel metal sinks, etc.



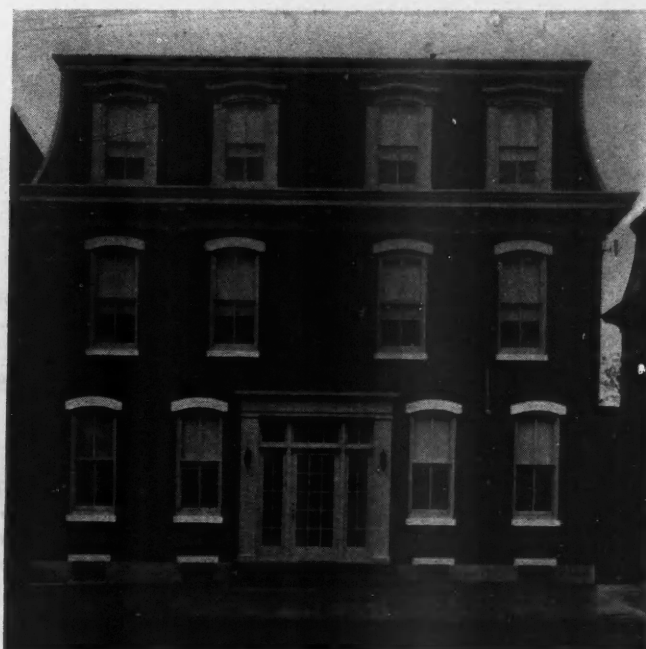
AT RIGHT: One of the occupied kitchenettes in the Homer Apartments, before modernization. Note exposed storage of utensils, foodstuffs, etc.



EXTREME RIGHT: Typical Penn-Lynn (formerly Homer) Apartment kitchenette after modernizing with monel metal sink, refrigerator, etc.



BEFORE: 83 Per Cent Vacant



AFTER: 100 Per Cent Rented

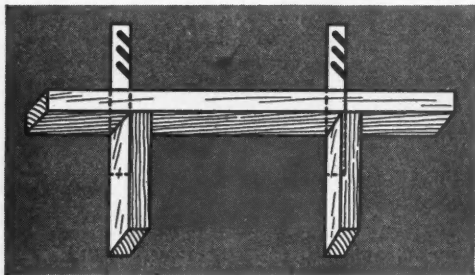
Penn-Lynn Apartments (formerly Homer Apartments) Philadelphia, Pa.

PRACTICAL JOB POINTERS

A READERS' EXCHANGE of tested ideas and methods, taken from their own building experience. Two dollars or a year's subscription to American Builder is paid for each contribution published.

Roofing Brackets of Strap Iron

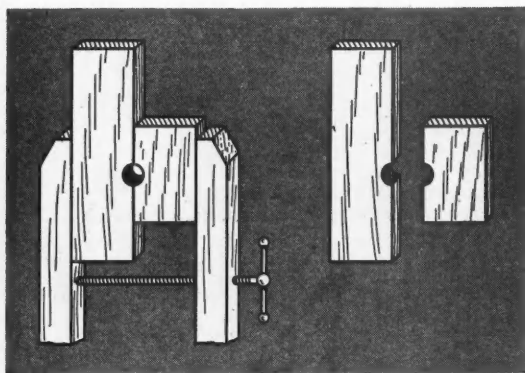
I AM enclosing a sketch of roofing brackets which I have used a number of years to hold 2 x 4 footholds in place when putting on asphalt shingle roofs. I use a piece of 2-inch band iron about 1/8-inch thick and 18 inches long which is notched on one end as shown in sketch. This is nailed on the under edge of a piece of 2 x 4 about 16 inches long. These brackets can be safely hooked over nails driven into the roof boards and after the roof is completed, they can be removed by hitting them on the bottom with a hammer, leaving the nails hidden under the course of shingles.—RONALD E. MILES, Ellicottville, N. Y.



Strap iron hooks hold this roofing bracket in place.

Makes Round Notch Quickly

THE accompanying diagram shows an easy way to cut round notches on the edge of a board. The board with a block of wood is placed in a vise. If a complete half circle notch is wanted, start the bit of the size desired, where the block and the board join.—M. E. COUCH, Little Rock, Ark.

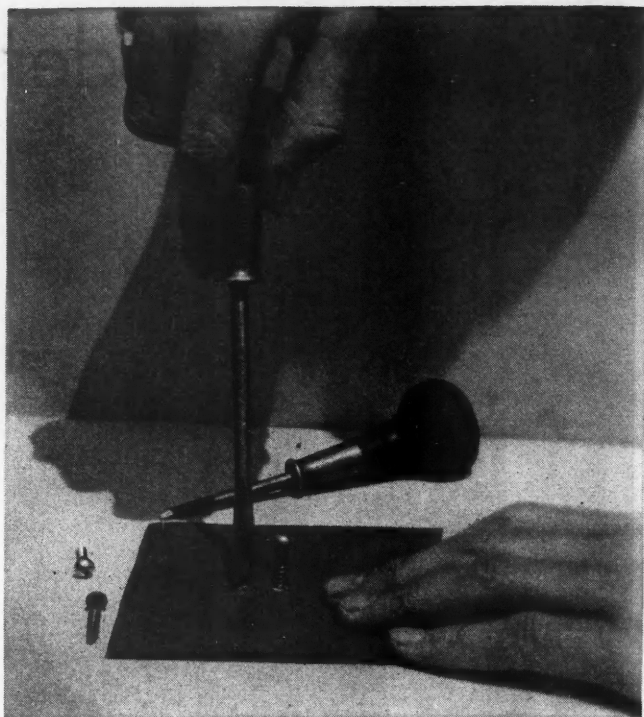


An easy way to notch a piece—producing a perfectly round cut—is this two block method.

Run and Rise

IN YOUR July number is a Job Pointer from California. If all carpenters would use a triangle of the run and rise, they would have no trouble about side cut of hip or valley jacks. For instance, for a roof with 9-inch rise per foot, it would be 9" plumb cut, 12" level cut, 15" side cut of jack. This applies to all even pitches.

Take two bevel squares, set one 9" on 9 & 12; the other one 15" on 15 & 12; use 15 for side cut. Now I don't think 3 figures are a lot to keep in mind, and it can be used for all cuts about the roof—gable frieze boards, any studding set against the rafters



Rubber pads prevent marring the surface.

or collar beams; 9 & 12 on 9" for anything that is plumb, 9 & 12 on 12" for anything that is level, 12 & 15 on 15" for any jack hip or valley frieze on gable roof.—H. L. BENEDICT, Naponee, Nebr.

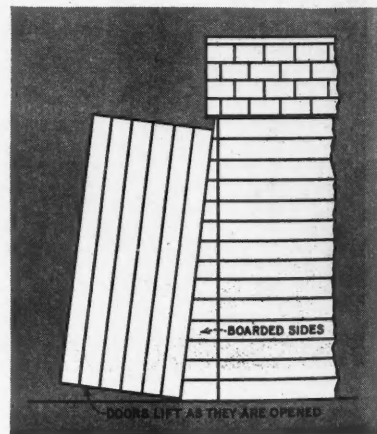
Rubber Pad Saves Surface

FINE surfaces are often marred when screw drivers or hammers slip and strike the surface into which the nails or screws are being driven. A rubber pad cut from a section of old inner tube and placed under the screw or nail will stop this damage. The pad must, of course, have a hole drilled in the middle so that it may be quickly passed over the nail or screw being driven.—LEONARD MITCHELL, San Francisco, Calif.

Garage Doors Open Easily

THE ordinary side hinged garage door will not open easily after a snowfall because the snow packs behind the door as it is moved. This, of course, necessitates a shoveling job which no one likes, especially in the early morning. This can be avoided by making the doors slightly different, as shown in my sketch.

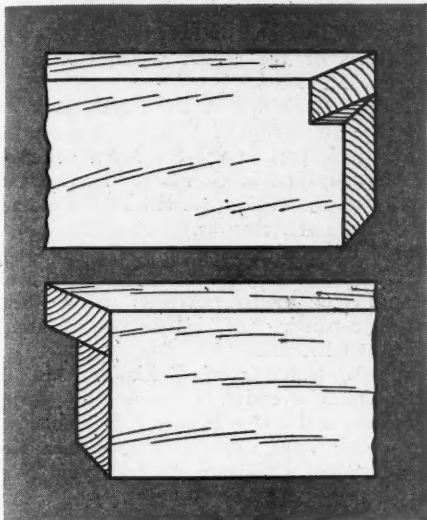
This alteration consists of inclining the doors a little instead of hanging them truly vertical. A couple of two by fours, one at each side, inclined as shown, are used and the space at the sides boarded up. It will be seen that when the doors are opened they swing up, thus clearing the snow entirely if it is not too deep.—H. MOORE, Hamilton, Ont., Can.



Inclining the garage doors slightly as shown here makes them clear obstructions and eliminates trouble from snow in winter.

Fitting Corner Base

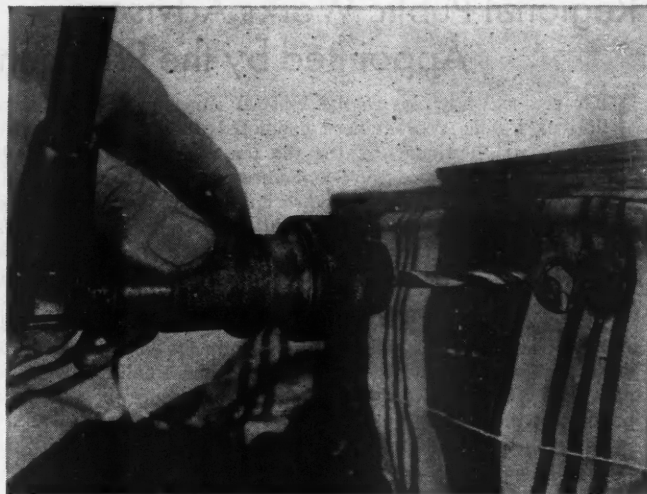
I AM sending a drawing showing how I fit baseboard in corners. This works well where round edge base is used and it takes a miter cut to fit. Only miter the board down about one and a half inches. Take the small block out of the first board and leave the miter projecting on the second. With a little practice a perfect joint can be made speedily.—R. S. DONELSON, Jr., Arlington, Tenn.



Fitting a baseboard in corners is done by taking small block from first board and leaving miter projecting on second.

A hooked drill inserted in brace makes it possible to turn screw eyes rapidly.

months of the year, and during the rest of the year it makes a very good storage space for other food supplies, being on the north side of the house where the sun never shines on it.—W. F. HOBBS, Wharton, Texas.

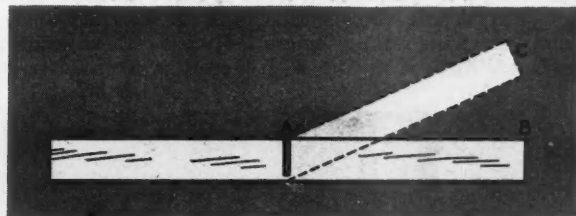


Fast Way to Turn Screw-Eyes

WHEN putting up sleeping porch curtains or attaching store front awnings, the work of tightening the screw-eyes can be quickly done with the aid of a brace and bit. The bit, an ordinary stock metal drill, is heated until red and the point bent into an L. This L spur when placed in the screw-eye, as shown in my sketch, allows the brace to be turned in an ordinary manner. Only a few turns of the brace will be necessary to screw the eye very quickly into the wood. Awning screw-eyes can also be quickly removed with this device.—RAY. J. MARRAN, Kansas City, Mo.

Cuts for Bending Board

USE and recommend the following method to find the distance to space the saw cuts for bending a board to a certain arc: First, find the radius of the circle of which the arc is part and make this distance A-B. Make your first cut at A and bend the board until the cut closes on the top, and the distance from B to C, measured from top of board to top of board, will be the space between the saw cuts. If cuts are spaced accurately and of uniform depth, it will be found that when the board is bent, until all the cuts close on top, you will have the desired arc.—J. E. ARAVE, Lava Hot Springs, Ida.



How to notch board to permit bending is shown.

Figuring Studding

I AM glad to pass along a method of figuring studs or joists with 16 inch centers. Just measure the length of the wall or floor in feet and divide by two, and divide the quotient obtained by two again. Add one and you will have the number required. For example, the floor is 20 feet long:

Half of 20 is 10
 Half of 10 is 5
 Add one 1

Answer 16

—J. GONSALVES, Jr., White Plains, N. Y.

Handwritten calculation: 20 / 2 = 10, 10 / 2 = 5, 5 + 1 = 6. Total: 16.

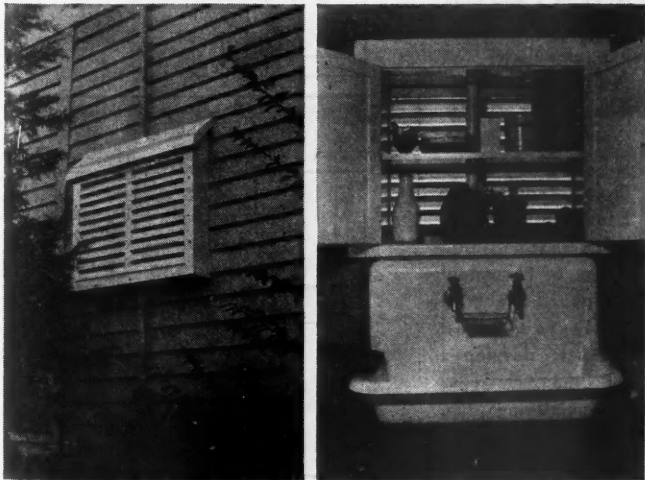
Window Cooler

I NOTICED the winter window cooler in your February number and having had a similar experience to that of Mr. Stanley G. Greene, I thought the cooler I have made might be of interest to AMERICAN BUILDER readers.

My mother asked me to fix up some shelves outside her kitchen window and enclose them with window screen netting. I told her that I did not think such an arrangement would look very well and that I thought I could make her something much more serviceable and better to look at. I am enclosing an inside picture and an outside picture of the little cabinet that I have made.

The jambs and top are made of 2" x 12" material. The ventilator slats are made of 3/8" x 4" material put in at an angle of 45 degrees. I took the few pieces of siding off the house, and after placing the cabinet, cut the boards to fit back closely. Screen wire is tacked on the back side of the ventilator. The pipe running up through the box is the vent pipe for the sink. It would have been easier to place the cabinet in some other position rather than right over the sink, but as it happened the place I have this one has been the most convenient for us.

It has proved a very convenient addition to our kitchen. In this part of the country it rarely ever gets cold enough to spoil food. We are able to keep milk this way for about four or five



W. F. Hobbs of Texas built this winter cooler.

NEWS—building activities of the month

Regional Public Works Advisors Appointed by the President

TEN regional advisors to the Federal Emergency Administration of Public Works were appointed July 24 by President Roosevelt and headquarters for the ten regions into which the Nation has been divided were announced.

These advisors will serve as direct representatives of the Federal Public Works Administration in the decentralized organization being set up to expedite the program of useful public works designed to give speedy employment and move men from relief rolls to pay rolls.

Secretary of the Interior Harold L. Ickes, as Public Works Administrator, made public the appointments and called upon various local governments seeking aid of the Public Works Administration to present only projects qualified under the announced policies of the administration.

These non-Federal projects are to be presented to the State Advisory Boards, the personnel of which will be made public shortly.

The regional advisors, together with the headquarters, are as follows:

REGION I.—Ralph L. Cooper of Belfast, Me. He is a native of Maine, educated at the University of Maine, a business man and a former member of the State Legislature. Boston will be the headquarters of the region which consists of Maine, Vermont, New Hampshire, Massachusetts, Rhode Island and Connecticut.

REGION II.—Edward J. Flynn of New York City—Secretary of the State of New York. The city of New York will be the headquarters of the region which consists of New York, Pennsylvania and New Jersey.

REGION III.—Daniel J. Tobin of Indianapolis, Ind. Mr. Tobin is a leader of labor, a former treasurer of the American Federation of Labor and has served on many trade union and government committees. Chicago will be the headquarters of the region which consists of Illinois, Indiana, Michigan, Ohio and Wisconsin.

REGION IV.—Frank Murphy of Wheaton, Minn. He is a lawyer, president of the Minnesota State Bar Association and a farm leader. Omaha will be headquarters for the region which consists of North Dakota, South Dakota, Nebraska, Minnesota, Iowa and Wyoming.

REGION V.—N. Marshall Dana of Portland, Ore. He is editor of the Portland Journal. Portland will be headquarters of the region which consists of Montana, Idaho, Washington and Oregon.

REGION VI.—Justus S. Wardell of San Francisco, Calif. For many years he was editor and publisher of the Daily Journal of Commerce, served in the Internal Revenue Department under President Wilson, and was a candidate for Governor of California

in 1926. San Francisco will be headquarters of the region which consists of California, Nevada, Utah and Arizona.

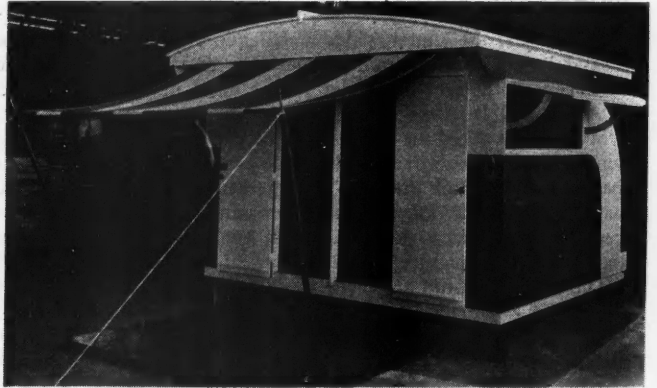
REGION VII.—Clifford Jones of Spur, Tex. Former president of the West Texas Chamber of Commerce, president of Texas Technical College Board and business man of large experience in public works and has been active in civic movements and director of the Fort Worth and Denver Railroad. Fort Worth will be headquarters of the region which consists of Texas, Louisiana and New Mexico.

REGION VIII.—Vincent M. Miles of Ft. Smith, Ark. A lawyer, a graduate of the University of Virginia, an overseas infantry commander who took part in the St. Mihiel offensive and was in the army of occupation in Germany. Kansas City, Mo., will be headquarters of the region consisting of Colorado, Kansas, Oklahoma, Missouri and Arkansas.

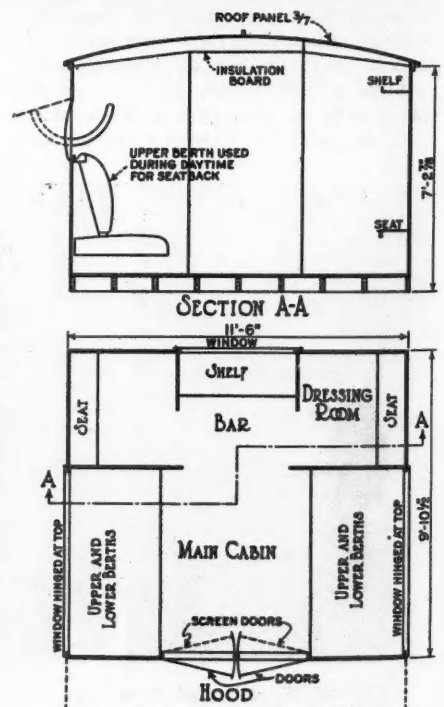
REGION IX.—Monroe Johnson of Marion, S. C. Col. Johnson is a world war overseas officer, a business man, and an active participant in American Legion affairs. Atlanta will be headquarters of the region consisting of Mississippi, Alabama, Georgia, South Carolina and Florida.

REGION X.—George L. Ratcliffe of Baltimore, Md. A graduate of Johns Hopkins University, a lawyer, the former Secretary of State for Maryland and a banker. Richmond will be headquarters of the region which consists of Tennessee, Kentucky, West Virginia, Maryland, Delaware, Virginia, and North Carolina.

Functions of the regional advisors will consist of obtaining from the State Boards within the region lists of projects.



HERE IS a new type of structure of growing popularity on the beaches—the Cabana. It was designed by Kenneth C. Welch of the Grand Rapids Store Equipment Co. and is built from large panels of Phemaloid laminated wood product developed by the Haskelite Manufacturing Co. Interior is shown at left. The upper berth folds down to make back of lounge.





MAKE MORE PROFIT . . . ON YOUR BRICK-WORK

WHEN Brixment is used for mortar, the contractor *automatically* cuts out a series of needless costs and wastes, the combination of which can frequently make the difference between loss or profit.

There is no need to send either men or material to the job in advance of the actual work. No lime, no slaking: Brixment is ready to mix and use at once. Brixment and sand *alone* are used. *Less supervision and less labor* are required in mixing.

Brixment mortar can be mixed in large or small batches as the work requires, to "come out even" at the end of the day. No mortar wasted.

And, most important of all, Brixment mortar works easier, spreads further *and sticks to the brick*. This enables the bricklayer to throw up his head-joint without stooping to the board for more mortar—saves both time and material....

Brixment mortar leaves the trowel clean, so the bricklayer does not muck up the wall when he cuts off the bed joint. Walls laid in Brixment mortar are therefore neater *and easier to clean down*.

Brixment easily carries three full parts of sand. It costs less than the cement and lime required to make an equal amount of mortar.

LOUISVILLE CEMENT COMPANY, *Incorporated*, LOUISVILLE, KY.

District Sales Offices: Builders Bldg., Chicago; 600 Murphy Bldg., Detroit; 101 Park Ave., New York . . . Mills: Brixment, N. Y. and Speed, Ind.

BRIXMENT

A Cement for Masonry and Stucco



Survey Shows Quickening Real Estate Market

RISING ACTIVITY PREDOMINATES FOR FIRST TIME IN FOUR YEARS

Of Largest Cities, 33 Per Cent Show Single-Family Dwelling Shortage

Chicago, July 23: Real estate activity is rising. The increased activity is measurable and well distributed. That is the outstanding fact shown by the 21st semiannual survey of the real estate market made by the National Association of Real Estate Boards, released here today.

This is the first time since June, 1929, in which this semi-annual survey has shown a predominating upward trend in market activity.

The survey tabulates confidential reports from the Association's member boards in the principal cities of the country. The current study covers 245 cities. Of the 245 cities, 39 per cent report a more active real estate market than last year at this time, 34 per cent report a less active market, 27 per cent state that activity is approximately on last year's level.

The picture is changing rapidly. The February survey of this year showed 65 per cent of the cities with a market less active than the previous year, 24 per cent in a stationary condition, and only 11 per cent with increased activity. The low of the four year depression period from the point of view of market trends (though not from the point of view of price levels) came in July of 1932, when 69 per cent of the cities reporting showed declining activity and only 9 per cent showed increased activity.

Recent gain is most general in the East South Central section, where 67 per cent of the cities show a more active market and not a single city checks "less active." In the West South Central section 53 per cent of the cities show an up movement; in the South Atlantic section, 50 per cent; in the Pacific section 55 per cent. Strongest pick-up so far has come in the group of cities of between 200,000 and 500,000 population, where 55 per cent report rising activity.

Selling Prices Still at Advantageous Purchase Levels

But while market activity is definitely and generally increasing, prices are generally still at depression levels. They are lower than last year in 78 per cent of the cities reporting. They are already higher in 3 per cent of the cities, approximately on last year's level in 19 per cent. The West South Central section shows the most advanced pick-up, with 20 per cent of the cities here reporting higher prices. Cities between 200,000 and 500,000 population are, as before, the group registering the greatest gain. Here 10 per cent of the cities already feel the change in price level upward.

Money for Mortgage Loans Practically Non-existent: Interest Rates Rising

In 90 per cent of the cities reporting there is still a shortage of money for real estate mortgage loans. In cities of over 500,000 population, which of course includes the principal credit sources for the country, 80 per cent of the cities report that loans are seeking capital. In cities of between 200,000 and 500,000 population, 100 per cent report loans seeking capital.

Interest Rates Tend to Rise

With interest rates a key element in the general business situation, 24 per cent of the cities report rates on real estate mortgages as rising. In 65 per cent of the cities the rate holds steady. In 11 per cent it is falling. The East South Central section has the steadiest situation, with 100 per cent of the cities reporting stabilized rates.

Typical comments accompanying the reports:

"If proper real estate financing could be had the market would pick up at once. Many people are seeking homes but are unable to finance the purchase." "Lack of mortgage loan money has reduced prices to far below the 1929 levels." "Good builders

are willing to build in logical locations but are prevented by lack of mortgage money." "No money in sight for good loans: Can not finance any homes even though they are contemplated for owner occupancy." "Prices will advance rapidly when market consumes distress sales."

Closed banks, in many communities, are still tying up normal transactions. Reports, over and over, emphasize the general feeling that in the period of the past weeks the bottom, for real estate, has been reached and passed. They point out that advance in local industrial activity would bring at once a very definite change in all factors of the local real estate market.

Shortage of Single-Family Dwellings in One-Third of Largest Cities

In 33 per cent of the cities of over 500,000 population there is a shortage in single-family dwellings. *Not one of the cities in this group showed such a shortage six months ago.* Undersupply of one-family houses is indicated in 12 per cent of all the cities. This is 5 per cent more cities than showed such a situation in February. Many cities report that with any return to normal buying power they would have a dwelling shortage. Where oversupply exists there is often at the same time an actual shortage of new, modern houses, the overstock being heaviest in large old houses.

Rents Still on Depression Level

Rents have not yet followed the up trend of other commodity costs. They are lower than last year in a majority of cities reporting, for every type of property. "Residential rents are lower, but are not dropping," a typical report states.

The most general movement for increased rents is reported in the small cities, those under 25,000 population. It is coming in single-family dwellings. In this type of property 9 per cent of these cities report rents up. Cities of over 500,000 population uniformly show rates lower than last year, both in single-family dwellings and in apartments.

Outlying business sections have been harder hit than central business in the recession of use brought by the depression both to business and to office buildings.

On subdivision market activity 18 per cent of the cities show a condition approximately the same as last year. 82 per cent report a less active market. But there is a new note here. "Suburban acreage demand more active," a number of reports state.

ADMINISTRATION MOVES TOWARD INCREASED HOME OWNERSHIP

Two recent developments in the Federal administration's announced policy of encouraging wider home ownership:

1. Greater activity in the building of small homes was announced by Secretary Daniel C. Roper as one of the subjects to be considered by the executive committee of the Business Advisory and Planning Council for the Department of Commerce. A meeting of the executive committee was called July 21 by Gerard Swope, chairman.

2. President Roosevelt attached to I. R. A. code number-one, the Cotton Textile Industrial Code, the following order: "The planning committee of the industry, provided for in the code, will take up at once the question of employe purchase of homes in mill-villages, especially in the South, and will submit to the administration before January 1, 1934, a plan looking toward eventual employe home-ownership."

3. President Roosevelt on July 22 signed an executive order authorizing the expenditure of the \$25,000,000 authorized by the Industrial Recovery-Public Works Act for making loans and otherwise aiding in the purchase of subsistence homesteads for industrial workers. Secretary of the Interior Ickes is put in charge. Money as repaid becomes a revolving fund further to carry out the purpose.

Enroll with.. STRAN-STEEL



Start Now — and build with STRAN-STEEL . . . the greatest advancement in construction IN THE LAST FIFTY YEARS.

To Left—Our Detroit Factory

STRAN-STEEL FOR ANY TYPE OF HOUSE

Stran-Steel replaces old fashioned two-by-fours and wooden beams in the construction of homes of all types of architecture without change in the architect's plans.

Stran-Steel can be used with any style of architecture and for any type of building. It is interchangeable with wood and it is suitable for either platform or balloon type framing.

Light in weight and easy to handle, it is laid out on the job and erected like wood framing by the same men in the same length of time. Siding, flooring, lath and roofing are nailed to Stran-Steel studs and joists just as they are to wood.

The Stran-Steel Corporation is now making contacts throughout the United States with builders, architects and dealers. Responsible parties with experience in the building industry are invited to investigate.

Write us for full information

STRAN-STEEL CORPORATION

6100 McGraw Avenue

Detroit

Michigan

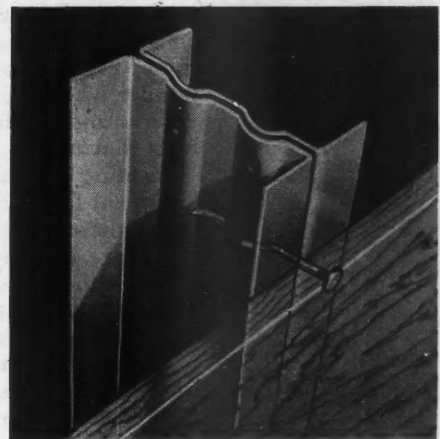
Send me book describing Good Housekeeping-Stran-Steel house built at "A Century of Progress," Chicago, and giving complete details of Stran-Steel construction. For this I am enclosing 25c.

Name

Address

Town State.....

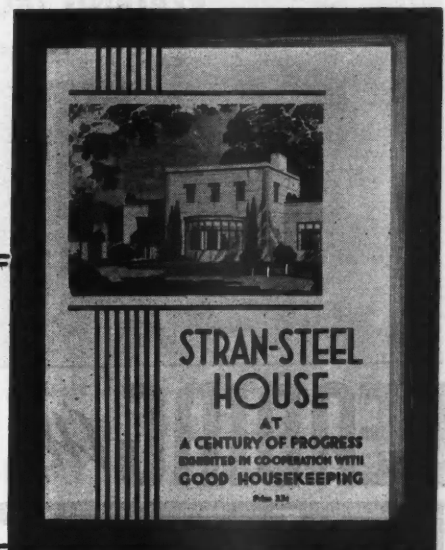
Please check: Dealer, Contractor, Architect, or other interest.....

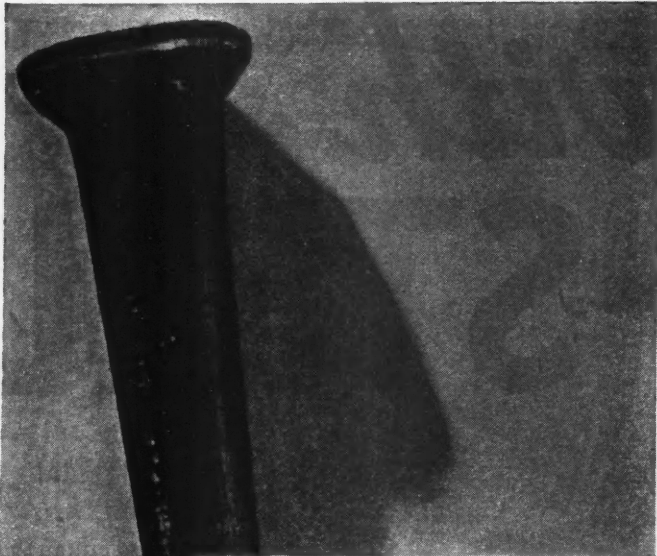


You Nail to Stran-Steel

GET THIS BOOK

Send 25c with the coupon below. Be completely informed on Stran-Steel construction.





To BUILDERS— who would rather SELL than WAIT

MOST of your customers think of nails as "just nails". But there's opportunity . . . and profit . . . for the builder who is smart enough to sell nails—and to handle the kind of nails that *can* be sold.

Reading Cut Nails give you an extra argument for wood construction. Because these nails are wedge-shaped, they have holding power unequalled by any other type of nail. They satisfy today's desire for permanence and security in construction . . . economy of upkeep. For remember, all of the wooden buildings that have survived from Colonial times are put together with cut nails.

You can get Reading Cut Nails for every purpose. Write us today for more information and prices on Reading Cut Nails.

READING IRON COMPANY
Philadelphia

READING *cut* NAILS
Cut From Solid Plate

NEW PRODUCTS

FOR FURTHER INFORMATION about any new product write the American Builder Information Exchange, 105 West Adams Street, Chicago, Ill.

New Wool Batt Insulation

A NEW non-structural insulation has recently been added to the line of one of the biggest and best known manufacturers—a pioneer in the field. It is designed to meet the need in certain types of construction for a non-structural insulating material in wool batt form.

The new wool batt consists of pure rock wool of high quality, properly felted into a wall-thick batt, 15 inches by 18 inches in size, that fits snugly between studs, joists and rafters. The



New rock wool batt comes wall thick, 15 x 18 inches in size. Weighs only 2½ pounds.

batt has substance and strength, together with light weight—two and one-half pounds per batt—which assures increased insulating efficiency and avoids the hazard of excess extra loads between framing existing when heavy wall-thick insulations are used. The batt is carefully felted to a thickness that leaves a small air space between it and the interior wall so that it will not interfere with the formation of plaster keys when open lath is used.

A uniform texture and structure is maintained throughout, guaranteeing specific, uniform protection. Its positive efficiency cannot be affected by application. Its springy, self-sustaining nature is assurance that it will maintain its uniformity after installation. It cannot settle and sag between studs.

Air Conditioning Attracts Attention At A Century of Progress Exposition

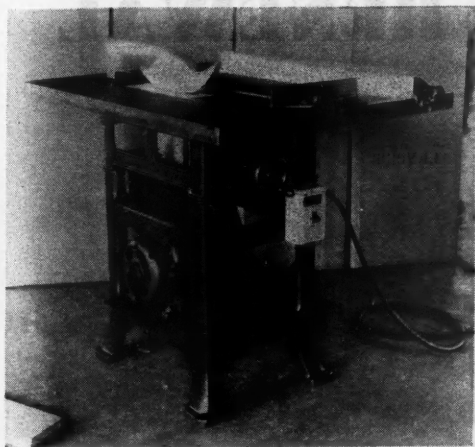
(Continued from page 25)

are similar to the one just described in the Rostone house.

In addition to the home heating and air conditioning installation, there are a number of exhibits in Home Planning Hall and in the adjacent building industry exhibits buildings sponsored by individual manufacturers. One of the most interesting of these is a new type of system which uses steam and city tap water for cooling. The reaction of most contractors to the displays is that air conditioning might be a good thing if properly handled by men in the building industry rather than leading the public to expect more than they can possibly get at the present time.

Saw Handles 20-Inch Pieces

THE rip saw table illustrated below has been developed to meet the demand of builders and contractors for a machine having an extra large table. This machine will rip, cross-cut and miter material up to 20 inches wide. The table is made of cast iron heavy ribbed and measures 32 x 44 inches. The saw blade is 12 inches in diameter, giving a maximum ripping capacity of 3 3/4 inches. The miter gage and ripping fence are graduated and slide in grooves milled into the surface of the table. The machine is fitted with an aluminum guard over the saw blade and a splitter knife back of the saw blade. The motor for driving the machine is 3 H. P. and is attached to a sliding base which permits tensioning the belt. The belt is carried to the arbor pulley over ball-bearing idler pulleys so that the blade can be raised and lowered by the hand wheel on the front of the machine. This saw table is intended for the heaviest kind of production work.

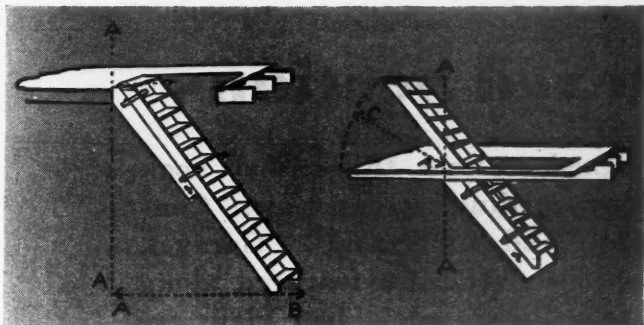


For fast, heavy work this new saw is especially designed. Will handle pieces 20 inches wide.

Space Saving Attic Stairs

NEED for space economy makes this improved product—a self balanced disappearing stair—especially interesting for home builders and modernizers right now. Designed by a contractor, this stair comes completely assembled in the jamb ready for mounting in the rough opening. Jamb can be furnished in any depth to suit thickness of joists, floor and ceiling construction. To install, it is only necessary to nail the jamb in the opening. After the opening has been prepared, only 30 minutes is required to install stairs.

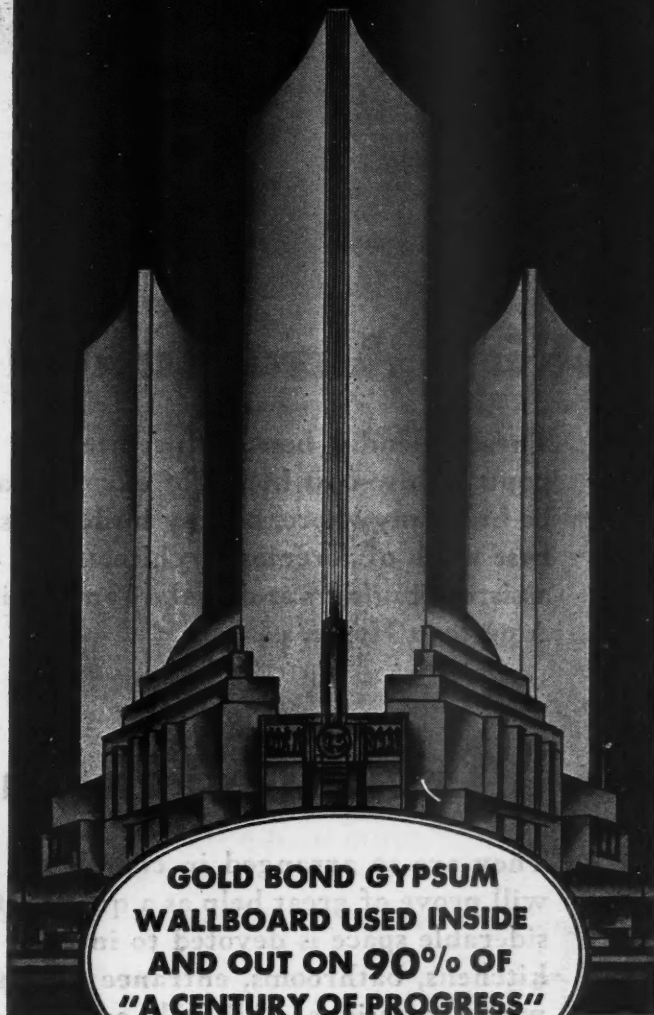
Hardware has been perfected to a high degree. It is of cold rolled steel with japanned finish. The door panel is attached to the jamb by two concealed heavy hinges 2 inches wide by 6 1/2 inches long. The stairs slide up and down in two sets of specially designed roller guides with flanges beveled to prevent binding of the stair stringer. A controlling device consisting of a drum carrying a steel tape 3/4 inch wide mounted on a spring controlled roller exactly counterbalances the weight of the stairs. No adjustments whatever need to be made on the job. The weight assembled is 125 pounds, and the price is under \$40.00, making this an economical, satisfactory product for the small home.



Saves space: in five models floor to floor distance is from 7'10" to 10'. Distance AB is 53" to 66". Distance AC is 62" to 78".

Gold Bond

THE
CENTURY OF PROGRESS
WALLBOARD



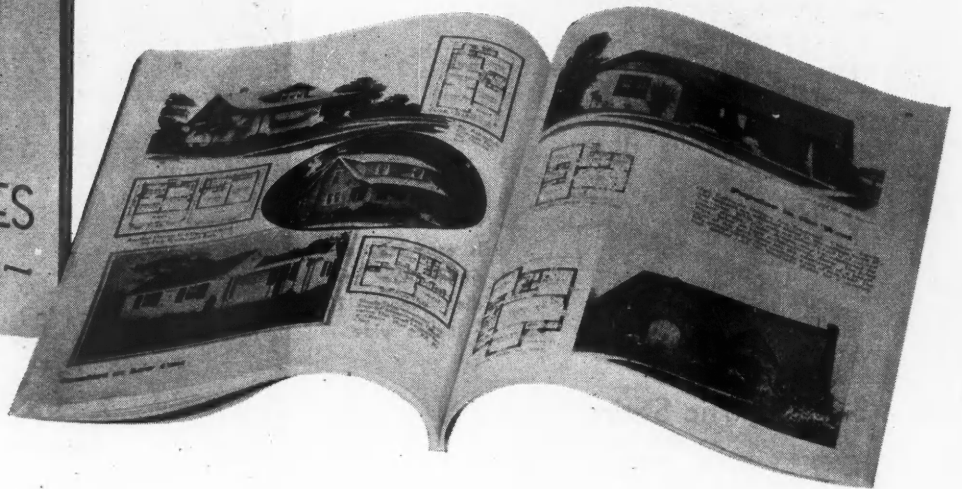
**GOLD BOND GYPSUM
WALLBOARD USED INSIDE
AND OUT ON 90% OF
"A CENTURY OF PROGRESS"
BUILDINGS**

GET ONE OF THESE

**WITH YOUR
AMERICAN BUILDER
SUBSCRIPTION
NEW OR RENEWAL**



SMALL HOMES OF CHARM contains over 75 home designs in a wide range of American architectural styles; size 8½ x 11½—has an attractive paper cover; eight pages of colored art inserts. Sent free with a regular paid up subscription.



A Wide Assortment of Popular Homes

These splendid books illustrate and describe in detail many beautiful, popular low-cost homes of exceptional style and variety—homes that can be built anywhere, on any building site, at any price—selected from the best work of foremost architects and design agencies with the purpose of assisting builders and dealers and their customers in planning the ideal American Home.

Arranged in Indexed Sections

They are so arranged in completely indexed sections that either book will prove of great help as a quick reference medium at any time. Considerable space is devoted to interior detail and furnishings. Garages, kitchens, bathrooms, entrance details, porches, etc., are featured along with the designs. All fully and elaborately illustrated. Floor plans are included with every design—working drawings with many. See complete description of contents of the two books on the following page.

FINE DESIGN BOOKS

Of Popular Low Cost Homes

AND YOU MAY HAVE YOUR CHOICE

AT NO EXTRA COST

of **SMALL HOMES OF CHARM**—a collection under one cover of over 75 small homes—the very last word in small house design—the pick of the work of leading architects and design agencies—attractively bound—divided into six sections for quick reference. Contains one or more examples of the principal styles of domestic architecture with floor plans—*Six complete working plans*—details of good construction—Home Garages—Suggestions for arrangement of modern bathrooms, kitchens, basements, etc. The most practical design reference book published in recent years.

Or At Slight Additional Cost

just 50c—**MODERN HOMES, THEIR DESIGN AND CONSTRUCTION**—a beautiful, elaborately illustrated book of 272 pages showing 122 home designs in 12 leading **PERIOD STYLES**—complete with all interior furnishings and inside detail. There are 85 exterior and 79 interior views; 181 illustrations of fittings and furnishings. In addition there are over 50 pages devoted to specifications; details of good construction in lumber, brick, steel and stone; heating and plumbing, electrical work, painting, etc. This book is a wonderful aid as a reference medium—a real credit to any office or home library.



MODERN HOMES—a handsome attractive book—printed on heavy coated stock—cloth bound—10 or more illustrations of each of 12 leading PERIOD STYLES.

HURRY! HURRY! HURRY!

Present supply of these books is the last of many successive editions—no more to be printed—rush your order in now—be sure you get a copy of your choice

TEAR OFF COUPON HERE * * * CHECK PROPER SQUARE * * * MAIL TODAY SURE

American Builder Publishing Corp.,
30 Church St., New York, N. Y.

Enter my subscription

Renew my subscription

for the AMERICAN BUILDER AT ONCE,

FOR 1 year at \$2.00.....
2 years at 3.00.....
3 years at 4.00.....

OR 1 year at \$2.50.....
2 years at 3.50.....
3 years at 4.50.....

and send a postpaid copy of
SMALL HOMES OF CHARM

and send a postpaid copy of
MODERN HOMES

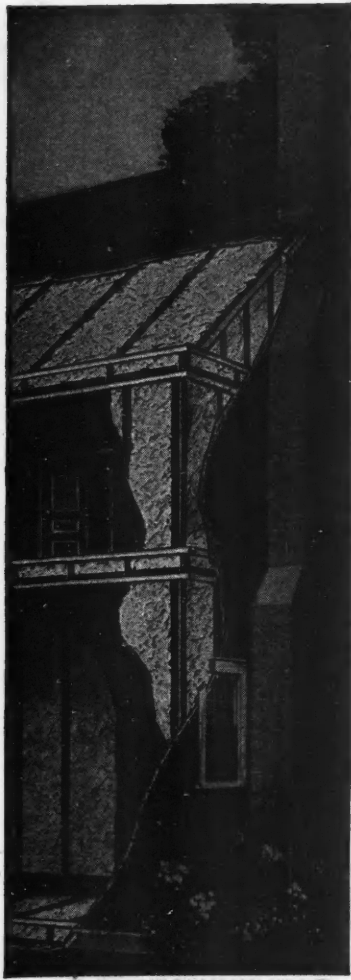
Note: Only one book with one subscription.

REMITTANCE HEREWITH or I WILL PAY ON RECEIPT OF YOUR BILL

NAME OCCUPATION

ADDRESS CITY & STATE

(These prices good in the United States and its possessions only)



INSULATE WITH U. S. MINERAL WOOL

The added value of insulation in a home is recognized by every architect and builder. It assures draftless rooms, increased living comfort and actual savings on fuel expense every year.

When you use Mineral Wool, you obtain the most effective protection from cold, heat, fire and sound procurable in an insulating material.

Being entirely mineral, vermin cannot burrow or live in Mineral Wool. No other insulating material offers a like protection from vermin and disease germs.

Sample and folder on request, address nearest office.

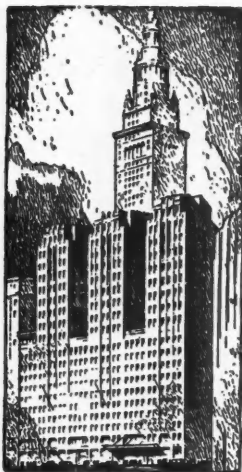
U. S. MINERAL WOOL COMPANY

280 Madison Avenue,
New York

*Western Connection
Columbia Mineral Wool Co.
South Milwaukee, Wisc.*

The NEW PRODUCTS Area AT THE BUILDING ARTS EXHIBIT

In times like the present, many manufacturers are adding new products to their lines and alert builders and architects are keeping closely in touch with these new developments and the advantages they offer. • In the Cleveland territory, the New Products Area at the Building Arts Exhibit affords an excellent opportunity for actual inspection and study of new and approved products in the building and allied fields. It will give you new ideas and worthwhile suggestions. • Make it a point to inspect this, and other features of this Exhibit, when in Cleveland.



**BUILDING • ARTS
EXHIBIT • INC.**
BUILDERS EXCHANGE BUILDING
CLEVELAND . . . OHIO

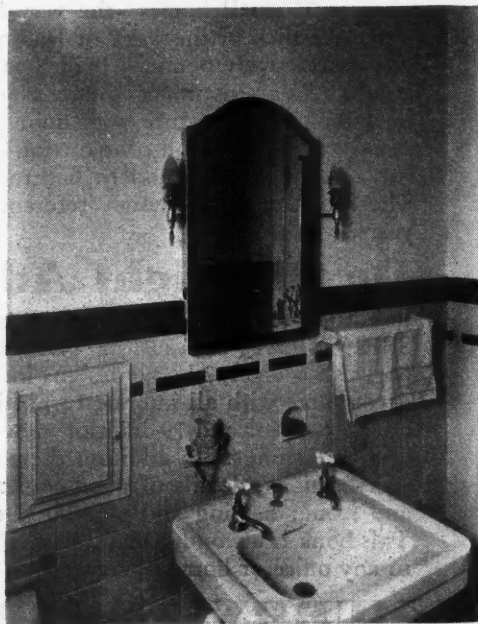
A UNIT OF THE CLEVELAND TERMINAL GROUP

NEW PRODUCTS

FOR FURTHER INFORMATION about any new product write the American Builder Information Exchange, 105 West Adams Street, Chicago, Ill.

Bath Cabinet with Lights

THE new insert bathroom cabinet with side lights shown below has many distinctive features. These include the new and up-to-date mirror design, the graceful light fixtures, the strong construction, and last but not least, the low price. The mirror is furnished with black, orchid, or green borders. It is etched with an attractive water lily and cat-tail design. Mirrors are backed with copper, which means they will last five times as long as the average mirror. The attractive side-light brackets are finished in chromium, highly polished.



Cabinet is furnished with lights and switch and a convenience plug for curling iron.

The construction of this cabinet is the standard Venetian type with pan-shaped door, door stop, concealed hinges, removable doors, etc. The wiring in each cabinet bears the Underwriters' label. The cabinet is furnished with a switch for operating the lights and a convenience plug for curling iron and electric iron on the side of body flange—another saving of several dollars for wall outlets.

The Junction box is located at the bottom of the cabinet. It has an access plate, so that house wires can be easily connected to the wires of the cabinet, after the cabinet has been inserted into the wall.

Specifications include: Mirror size, 18 x 28"; outside dimensions of cabinet flanges, 17 x 23½"; depth of flanges, 1¾"; inside dimensions of cabinet, 14¾ x 20¾ x 4¼"; wall opening, 14¾ x 21¾ x 2¾"; bulb edge shelves, 3; weight, 45 lbs.

Flexible Boiler Jackets

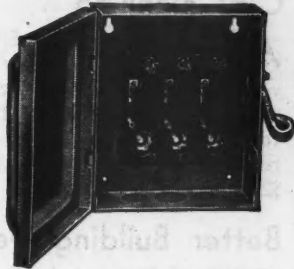
A NEW specialty of value and great interest to builders, especially in connection with modernizing and improvements, is an asbestos flexible range boiler jacket made of alternate layers of corrugated and flat asbestos paper. The corrugation provides dead air space, giving it high insulating qualities. The jacket comes in two sections, easily fitted to the boiler with four brass lacquered bands. A bag of asbestos cement is included in the package to cover and insulate the top of the boiler.

Public utility engineers report savings of from 25 to 65 per cent in the cost of hot water when the jacket is properly insulated. Since this new jacket is highly efficient, easy to apply and low in cost, it makes a specialty that should have a wide sale among home owners who are now paying excessive gas bills. Information will be sent on request.

Enclosed Switches

EVEN the switch boxes are being made attractive these days. A new line of enclosed switches designed by specialists has just been announced by a leading electrical manufacturer. An attractive appearance is given the product by dressing it up with an aluminum satin finish which provides a rust-proof surface that will not crack or chip, and which makes a most attractive job, emphasizing the quality nature of the product.

The new line features full floating, self-adjusting, double break contacts with positive switch action and spring throw-off and on. Plenty of wiring room is provided, with adequate room at top, bottom and sides, making it easy and economical to wire. The arc is effectively smothered in a porcelain well, and broken by fiber carrier plates which are interposed between the stationary contacts. This makes an attractive, low priced and efficient line of switches which are very worth while.



Switch box is given rust-proof satin aluminum finish.

New Safety Treads

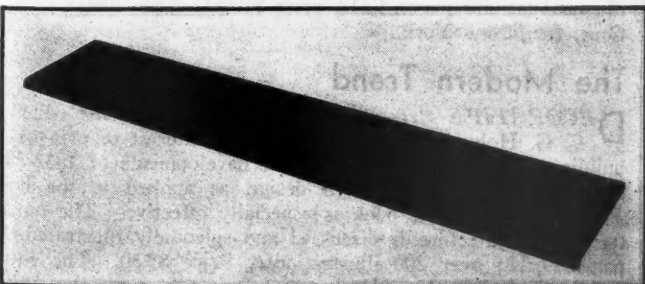
AN ENTIRELY new type of safety tread that is especially suitable for use in school buildings, department and chain stores, office buildings, industrial plants, hospitals, hotels and similar structures has just been placed on the market.

The new safety tread is composed of alundum aggregate securely bonded in a reinforced base of hard, tough rubber. It makes available in a replacement type of unit features of permanent safety and high durability.

The aggregate is used to provide non-slip effectiveness. It consists of chips of abrasive (aluminum oxide) that are not only extremely hard and tough but also irregular, angular and slightly porous so that they bond well with the rubber. The tread's non-slip effectiveness is permanent—it will not wear smooth. It has a flat, level surface so that there is nothing to catch heels or to cause a tripping hazard. The tread is not affected by weather conditions and its non-slip action is not lessened by water. Thus it is suitable for use in exposed locations out of doors as well as indoors. It is supplied in units of various lengths and width and can be placed directly over old wood, steel, concrete or stone steps. The installation work can easily be done by any carpenter or handy man.



New non slip tread uses abrasive chips to prevent slipping.



EDWARDS



METAL SPANISH TILE

Withstands the "Test of Time"

Architect John M. Peterman of Ft. Lauderdale, Florida, selected Edwards Metal Spanish Tile for his own residence and recommends it to his clients because it resists the destructive action of salty air, lasts for years without attention and adds distinction to the buildings.

Let us figure your next roofing job

On receipt of your roof measurements we will quote you a low delivered price that will enable you to close the contract with a handsome profit. Our proposition covers Appearance—Durability—Protection—Economy. Equally satisfactory in all climates and under all conditions of exposure to fire, lightning, wind and weather. Write today for Catalog No. 72.

THE EDWARDS MANUFACTURING CO.

542-562 Eggleston Avenue

Cincinnati, Ohio

Sheet Metal Building Materials—Roofing—Siding—Ceilings—Makers of the famous Edwards Hot-Kold Air Conditioning System

AMERICAN STEEL SHEETS

FOR ALL KNOWN USES



KEYSTONE Copper Steel Sheets Excel in the Building Field

Use sheets of recognized reputation and value. For roofing, siding, gutters, spouting, air conditioning systems, and general sheet metal work—Keystone Copper Steel gives maximum rust resistance.

Insist upon AMERICAN Black Sheets, Keystone Rust Resisting Copper Steel Sheets, Apollo Best Bloom Galvanized Sheets, Galvannealed Sheets, Heavy-Coated Galvanized Sheets, Formed Roofing and Siding Products, Terne Plates, etc. Write for information.

This Company also manufactures U S S STAINLESS and Heat Resisting Steel Sheets and Light Plates for all uses to which these products are adapted.

AMERICAN SHEET AND TIN PLATE COMPANY, Pittsburgh, Pa.

(SUBSIDIARY of UNITED STATES STEEL CORPORATION)

CORNELL FLOAT-OVER DOORS

**New GALVANIZED
TUBULAR STEEL
OVERHEAD ACTING DOORS
LIGHT AS WOOD.
SURPRISINGLY LOW COSTS**

AT LAST a fire-proof, burglar proof door that will not warp or sag. Equipped with exclusive self-sealing weatherstrip. Backed by a reputation of nearly a century, for manufacturing fine doors. As you know—FLOAT-OVER Doors are also made in wood, 1 1/2" and 2 1/4" thickness.

Agents in all Principal Cities

CORNELL DOOR WORKS, Inc., Long Island City, N. Y.

Send for CIRCULAR and SPECIFICATIONS
makers of famous Cornell Rolling Doors and Rolling Grilles

AMERICAN FLOOR SANDERS

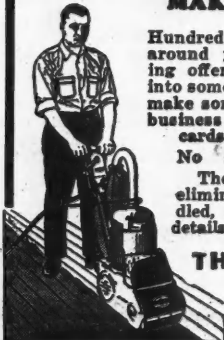
MAKE BIG PROFITS

Hundreds of old floors all around you needing resurfacing offer you a chance to get into something for yourself, and make some money. We supply business getting circulars and cards that bring in the jobs. No experience necessary.

The New American Spinner disc edging machine eliminates hand work on edges. It is easily handled, compact and powerful. Write quick for full details, sent without obligation.

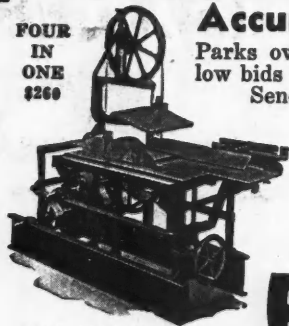
**THE AMERICAN FLOOR SURFACING
MACHINE COMPANY**

511 South St. Clair St., Toledo, Ohio



American Spinner
Disc Edging Machine

FOUR
IN
ONE
\$260



BALL BEARING
Includes 22" hand saw, 12" jointer, circular rip and cross-cut saw and boring machine.

Accurate and Speedy

Parks owners come out ahead with low bids and good profits on the job. Send for complete catalog.

**THE PARKS WOODWORKING
MACHINE CO.**
Dept. BL-8, 1524 Kneviton St.,
Cincinnati, Ohio
Canadian Factory: 338 Notre Dame
East, Montreal

PARKS
WOODWORKING MACHINES

3 NEW WAYS to PROSPERITY IN A BUSINESS OF YOUR OWN



Colored Pottery, Art Novelties, Garden Furniture—A Pleasant, Profitable Industry. 40 Beautiful and exclusive designs. Sell quickly at 3 to 5 times cost. Art Novelties and sculptured pieces sell up to 400% profit. New casting process—easily molded with our new, flexible rubber molds.

New Modernizing Process Pays Big Returns—Offers you a lucrative business in exterior and interior decoration. This process resurfaces all masonry in permanent colors at the amazing low cost of 10c a square yard. Scores of jobs await you in every locality up to 200% profit.

Learn about the Large Earning Power of these enterprises and the small investment required. Investigate. Write today for complete information and the opportunities offered right in your own locality.

COLORCRETE INDUSTRIES, Inc.
see Ottawa Ave.,
Holland Michigan

BOOK REVIEWS

Aid in Remodeling

A NEW volume entitled *Remodeling & Adapting the Small House* by Harold Donaldson Eberlein and Donald Greene Tarpley has just been published which has many helpful suggestions for modernizers. Although directed primarily at the home owner, it has many illustrations and facts about modernizing of help to the professional man; 127 illustrations and plans, 165 pages. Price, \$3.50. J. B. Lippincott Co., Philadelphia.

City Planning

A S part of its series of city planning studies, Harvard University School of City Planning has just published a new volume, fifth in the series, entitled *Transition Zoning* by Professor Arthur C. Comey. The book contains new and fresh information concerning the development of cities, of value to realtors, city planners and municipal officials; 150 pages. Price, \$2.50. Harvard University Press, Cambridge, Mass.

Better Building Details

ONE of the most helpful recent volumes for architects and builders is *Architectural Graphic Standards* by Charles G. Ramsey and Harold R. Sleeper. This is a large size (9x12 inch) volume made up entirely of the latest architectural drawings and details of all kinds. The authors have assembled a wealth of valuable material from many sources, including flashing details, window details, fireplaces, chimneys, framing details and much important data on sizes and standards used in building work. The drawings are large size, clear and carefully presented. Because it brings the subject of architectural detailing up to date, it is especially valuable; 235 pages. Price, \$6.00. John Wiley & Sons, Inc., New York.

Colonial Architecture

THE *Colonial and Federal House* by Rexford Newcomb, Dean of the College of Fine and Applied Arts of the University of Illinois, is a well illustrated and very interesting volume on America's most important architectural type. Features of good Colonial homes are given, telling how to build an authentic house; 100 plates; 175 pages. Price \$3.50. J. B. Lippincott Co., Philadelphia.

History of the Home

THE *Evolving House* by Albert F. Bemis and John Burchard is a history of the home. It is the first complete story of the evolution of the home and the social and economic forces that have influenced its development. The authors describe in an absorbing fashion prehistoric and primitive homes and then the evolution of the modern American home. Both authors are active men of the building industry and know its problems. In this study, the first of three volumes, they are laying the basis for an analysis of current housing conditions; 534 pages with 152 illustrations. Price \$4.00. Massachusetts Institute of Technology Press, Cambridge.

Latest Style

MODERN *Architecture* by Bruno Taut is a thoroughgoing volume on the important modern movement in architecture. The presentation is largely pictorial, with excellent photographs of hundreds of modern buildings in all parts of the world. In several brief discussions in the volume, Bruno Taut gives the history of modern architecture, its early development, and an analysis of what he considers Modern Architecture to be. 300 illustrations, 212 pages, 9x12, price \$10.00. The Studio Publications, Inc., New York.

The Modern Trend

DECORATIVE *Art—1933—The Studio Year Book* edited by D. C. G. Holm is a volume of especial interest to men of the building industry as it describes the developments of 1932-33 in architecture, art and modern design as applied to the home. Photographically, the book is especially effective. The modern trend in architecture is discussed and splendidly illustrated. 140 pages, 9x12; over 200 illustrations. Price \$2.50. The Studio Publications, Inc., New York.

Federal Mortgage Aid

(Continued from page 38)

3. Corporation may sell its bonds for cash and use cash for refinancing. (It is stated that this process probably will be used little if at all because of the possibility that it may interfere with Federal Treasury financing.)

Home Loan Bank Board

Members of the Home Loan Bank Board, which administers also the Home Owners Loan Corporation (not more than three to be of the same political party), are as follows:

William F. Stevenson, Cheraw, So. Carolina, chairman. Former representative from So. Carolina, and member of the House Banking and Currency committee in the 72nd Congress, which enacted the Home Loan Bank Act.

T. Dwight Webb, Nashville, Tennessee. Banker.

Walter Newton, Minneapolis, former representative from Minnesota, later secretary to President Hoover.

John H. Fahey, Boston, Massachusetts. Newspaper publisher. Former vice president, Associated Press, and Former President, Chamber of Commerce of the United States.

Russell Hawkins, Portland, Oregon. Lumber business.

State Managers for Home Loans

State managers of the Home Owners Loan Corporation, so far appointed, and their headquarters, as listed by A. E. Hutchison, secretary to the Federal Home Loan Bank Board and ex-officio general manager of the Home Owners' Loan Corporation, under date of July 20, 1933, are as follows:

State	Manager's Name	Headquarters
Alabama	E. H. Wrenn, Jr.	Birmingham, Alabama
Arizona		Phoenix, Arizona
Arkansas	Frank Milwee	Little Rock, Arkansas
California	Monroe Butler	
Colorado	John F. Lynch	Denver, Colorado
Connecticut		
Delaware		
District of Columbia	Charles A. Jones	Washington, D. C.
Florida	James R. Stockton	Jacksonville, Florida
Georgia	Frank Holden	Atlanta, Georgia
Idaho	C. C. Wilburn	Boise City, Idaho
Illinois	William George Donne	Chicago, Illinois
Indiana	E. Kirk McKinney	
Iowa		
Kansas	W. M. Price	Topeka, Kansas
Kentucky	W. T. Beckham	Louisville, Kentucky
Louisiana		
Maine		
Maryland	David Stiefel	Baltimore, Maryland
Massachusetts		
Michigan	John F. Hamilton	Detroit, Michigan
Minnesota	Zeke H. Austin	
Mississippi	Wiley A. Blair	Jackson, Mississippi
Missouri	G. C. Vandover	St. Louis, Missouri
Montana	E. C. Carruth	Great Falls, Montana
Nebraska	Charles Smrha	
Nevada	George W. Friedhoof	Reno, Nevada
New Hampshire	Charles E. Bartlett	
New Jersey	G. Frank Shanley	
New Mexico		Albuquerque, New Mexico
New York	Vincent Dailey	
North Carolina	Alan S. O'Neal	Salisbury, North Carolina
North Dakota	Fred W. McLean	
Ohio		
Oklahoma	John F. Mahr	Tulsa, Oklahoma
Oregon		Portland, Oregon
Pennsylvania	Jacob H. Mays	
Rhode Island		
South Carolina	Donald S. Matheson	Columbia, South Carolina
South Dakota	A. C. Steensland	Sioux Falls, South Dakota
Tennessee	Charles H. Litterer	Nashville, Tennessee
Texas	James Shaw	Dallas, Texas
Utah	J. F. Fowles	Salt Lake City, Utah
Vermont		
Virginia	John J. Wicker, Jr.	Richmond, Virginia
Washington	W. E. McCroskey	Seattle, Washington
West Virginia	Walter V. Ross	Charleston, West Virginia
Wisconsin	J. P. McQuillan	
Wyoming	Bayard Wilson	Casper, Wyoming

Branch managers and their headquarters are listed as follows:

Georgia: Savannah, John H. Calais.
 Illinois: Champaign, Carl J. Werner; Harrisburg, Oliver Alden; Moline, R. W. Rankin; Rockford, A. H. Seise; Peoria, Emerson Gilmore; Springfield, Mrs. Eva Batterton; East St. Louis, M. L. Harris; Mount Erie, F. C. Daubs.
 Missouri: Kansas City, W. C. Crawford; Moberly, John Atterbury.
 South Carolina: Spartanburg, Howard H. Carlisle; Charleston, Gus L. Knoblock; Greenville, T. P. P. Carson.
 Tennessee: Memphis, John P. Bullington; Chattanooga, J. M. Payne; Knoxville, Cowan Rodgers.

Chief Appraisers for the States are listed as follows:

Georgia: John Conyers.
 Tennessee: A. Tillman Jones, Jr.

Every effort is being made to get the institutions of this great national home financing machine into effective action as soon as possible. It has been announced that applications for loans are to be made by mail to the nearest office. Cases of great need and serious distress will be handled first, it is said.

PEERLESS

Building Specialties

THE MODERN HOME HAS A FIREPLACE



Complete descriptive literature is yours for the asking. Write us today.

When you build a fireplace, plan on using a Peerless Dome Damper. Successful operation of wood burning fireplaces is assured if Peerless Dampers are used.

These dampers are simple in construction, easily installed and operated, and will last indefinitely.

PEERLESS MANUFACTURING CO.
 1400 W. ORMSBY AVE. LOUISVILLE, KY.

ONLY A DOZEN LEFT!



ON OUR next production order for 20th Century Woodworkers we shall be compelled to revise upwards our cost figures.

This must mean a higher selling price. On our present stock of these invaluable time and money saving machines you can enjoy the present record low price. Remember you can cross cut, rip, join, shape and route, five operations for the cost of one. Ball bearing throughout, portable—may be taken to the job—and fully guaranteed.

Send for descriptive booklet, price and terms

AMERICAN SAW MILL MACHINERY CO.
 61 Main Street Hackettstown, N. J.

**JAEGER
10S**



GET OUR
LOW
PRICES

Tilting, non-tilting
Mixers, Contractors
Pumps, Paving Equip-
ment. Send for catalog.

The JAEGER MACHINE Co.
521 Dublin Avenue Columbus, Ohio

-- HANDLES LIKE
A 7S

Fastest, easiest to handle
2 bagger, all-steel, short
coupled, with knuckle
steering, roller bear-
ing wheels. Water
Regulator meets all
state require-
ments.

**PROVEN EARNING POWER
BIG FUTURE FOR CONTRACTORS**



Manufacturing a proven stable com-
modity used in the finest and biggest
buildings wherever made. Investment
only small fraction of that ordinarily
required for any other process.
Kalamazoo Haydite Tile Co. sells its
output at 100% mark-up. Orders re-
ceived exceeded a million units in one
month. Bayer & Brice, Flint, Michi-
gan, just received order for over a
half-million for brewery.
Learn about this wonderful automatic
machine and process. How it brought
success to others wherever used. Ex-
clusive franchise. Get the facts. Send
for free book "4 Keys to Success for
Contractors."

W. E. DUNN MFG. CO.
450 W. 24th St., Holland, Mich.



**New PROTEx
METAL WEATHERSTRIPS
FOR STEEL SASH**

Nearly every type of steel sash should be
weatherstripped. We have solved the problem
of doing this difficult job. This new flexible
Bronze Strip we have developed can be applied
to the numerous standard types of steel sash,
making tight contact around the entire window
when sash is closed. These new Protex strips
fulfill a long desired need. They are easy to
apply and you can guarantee satisfaction.

We also manufacture a complete line of metal
weatherstrips for every type of wood sash
windows and for every kind of door.

Write us at once for our proposition. We fur-
nish you with samples and sales literature.

Protex Weatherstrip Mfg. Co.
2306 W. 69th STREET CHICAGO, ILL.



**PRICES-CUT
25-40%**

Write for full par-
ticulars on ma-
chines and
prices

DEWALT
MACHINES CUT WOOD—METAL—STONE

On NEW
MACHINES
while they last.

DE WALT Products Corp.
229 Fountain Ave., Lancaster, Pa.

ALLMETAL

FOR RENOVIZING—FOR BUILDING

Our twenty years experience in manufacturing *Consistently Good* metal products is your guarantee of highest possible quality at economical prices.
Write for prices and free sales kit showing standard material and installation.

ALLMETAL WEATHERSTRIP CO. 2306 WEST CLINDEN STREET CHICAGO, ILL.

**INDEX TO ADVERTISERS
AUGUST, 1933**

A	Page	K	Page
Allmetal Weatherstrip Co.....	58	Kalman Steel Corp.....	4
American Floor Surfacing Machine Co.....	56	L	
American Saw Mill Machy. Co.....	57	Louisville Cement Co.....	47
American Sheet & Tin Plate Co.....	55	N	
B		National Gypsum Co.....	51
Brown Co.....	12	National Manufacturing Co.....	4th Cover
Building Arts Exhibit, Inc.....	54	P	
C		Parks Woodworking Machine Co.....	56
Colorcrete Industries, Inc.....	56	Peerless Mfg. Co.....	57
Cornell Door Works, Inc.....	56	Portland Cement Assn.....	11
D		Protex Weatherstrip Mfg. Co.....	58
De Walt Products Corp.....	58	R	
Dunn Mfg. Co., W. E.....	58	Reading Iron Co.....	50
E		Ruberiod Co.	3
Edwards Mfg. Co.....	55	S	
Eternit, Division of The Ruberoid Co.....	3	Sinalkraft Co.....	2
F		Stran-Steel Corp.....	49
Formica Insulation Co.....	3rd Cover	T	
J		Truscon Steel Co.....	10
Jaeger Machine Co.....	58	U	
Johns-Manville Corp.....	6-7	U. S. Mineral Wool Co.....	54

NOTICE TO ADVERTISERS

Forms for the September Number of the American Builder and Building Age will close promptly on August 15. New copy, changes, orders for omissions of advertisements must reach our business office, 105 W. Adams St., Chicago, not later than the above date. If new copy is not received by the 15th of the month preceding date of publication the publishers reserve the right to repeat last advertisement on all unexpired contracts.

AMERICAN BUILDER AND BUILDING AGE