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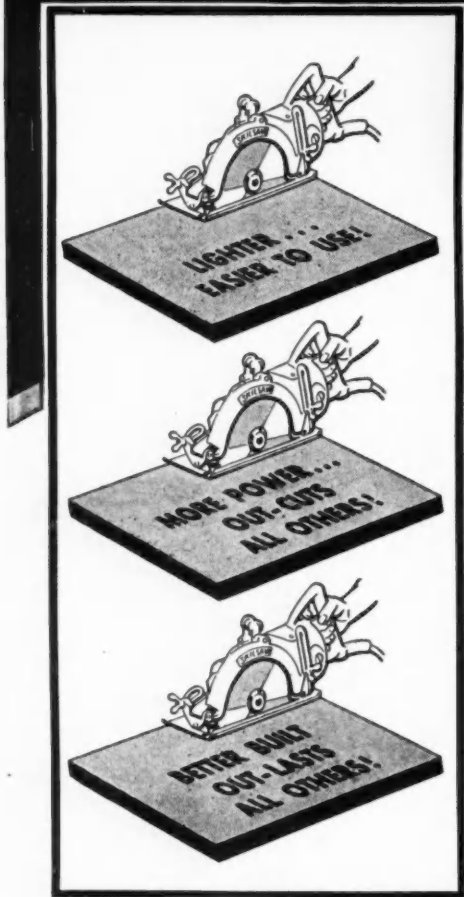
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PUBLISHER'S PAGE

The Means of Recovery

WHETHER in war or peace, no greater problem ever confronted the people of the United States than that of adopting the right *means* for recovering their prosperity. For it is entirely a question of *means*.

Everybody knows—with millions still unemployed and on relief—that prosperity has not been recovered. Everybody agrees the objective of all efforts and policies should be recovery. Differences of opinion are entirely regarding the *means* that should be adopted.

Although in politics, it is *solely an economic problem*. It has repeatedly been discussed in the *American Builder*; but this paper never was and never will be in politics. It is in favor of certain *economic* policies and opposed to others; but it doesn't care a "tinker's dam"—that is *not* profanity—what *political* party wins, if its victory will cause adoption of the *economic* policies necessary to recovery.

A READER writes concerning a recent article on this page: "I for one think the Good Old U. S. A. with its 'recession' is still *TOPS*. * * * It seems to me unbecoming in people with an ounce of good sense to compare an area as large as ours with countries like Sweden and Norway. * * * To compare our nation with Germany, Italy and Japan is really so ridiculous only a fool would trouble to answer."

The three great democracies of the world are the United States, France and Great Britain. Why did our correspondent ignore the figures for France and Great Britain in the article to which he referred? For the contrasted experiences of France and Great Britain have been very significant.

Under the "New Deal" here and the "Popular Front" socialist government over there the United States and France adopted very similar economic policies. Great Britain did not adopt any such

policies. The results are indicated by some statistics compiled by the League of Nations for the entire year 1938 which have just become available. In 1938 industrial production in the United States was only 72 per cent as large as in 1929; in France, only 77 per cent as large; while in Great Britain it was *116 per cent* as large.

IF the United States had recovered as much as Great Britain production in this country in 1938 would have been *60 per cent* larger than it was. If France had recovered as much as Great Britain its production would have been *50 per cent* larger. Great Britain's recovery has included the largest amount of *home-building* for many years; while in the United States and France there has not been anywhere near full revival of home-building.

Consider some other remarkable facts. In 1929 average income *per capita* in the United States was *57 per cent* larger than in Great Britain. At the bottom of the depression in 1932 it was still 46 per cent larger. But by 1937 Great Britain had recovered so much more than the United States that income per capita in that country *had become as large as in this country*; and in 1938 it was *larger*.

Different *economic* policies—different *economic* results.

There are those who desire continuance of the policies under which since 1932 we have had *less recovery than any other country in the world* for which information is available. They are entitled to their opinions—but the *American Builder* believes the experience of the *entire world* must throw light on the best *means* for recovering prosperity.

Samuel O. Dunn,



EACH BARREL OF 'INCOR' SAVED \$1.67

OF COURSE 'Incor' doesn't always cut construction costs—but just the same it pays to analyze every job to see whether 'Incor's dependable 24-hour service strength can save you money.

It certainly paid the Hancock Company, contractors, for Washington Avenue underpass, Mobile, Ala., to estimate carefully; for job analysis showed two places where 'Incor' would speed schedules, with important cash savings. One was in foundation piling, the other in the bridge deck.

Piles cast with 'Incor' were driven 21 days sooner. Then, after abutments had been placed, the contractor turned to 'Incor' again for use in the bridge deck, and was able to place ballast and track 21 days sooner.

Using the modest figure of \$15-a-day overhead, contractor estimates a 42-day saving of \$630 on time alone, *which meant a net saving of \$1.67 for each of the 290 bbls. of 'Incor' used.*

'Incor' savings on other recent jobs range from 38¢ to \$1.49 a cu. yd. of concrete. Suggesting that it is sound practice to estimate every job with both Lone Star and 'Incor'. Use 'Incor'* where 24-hour service strengths save money on time and forms; elsewhere, use Lone Star, the Portland-cement quality standard for over a quarter of a century. Write for copy of "Cutting Concrete Costs." Lone Star Cement Corporation, Room 2234, 342 Madison Avenue, New York.

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AMERICAN BUILDER

AND BUILDING AGE

Fair Tax Key to Building Recovery

TAXES—taxes—taxes.

The mounting burden of taxation has become one of today's major business and political questions. The American people are becoming acutely "tax-conscious"; they want fewer taxes and smaller ones—a lightened load on business and on the home owner; they are beginning to demand lower governmental costs and a more intelligent distribution of the tax burden to meet those costs.

The men of the building industry have a most direct interest in these tax matters since heavy real estate taxes are a bar to home building and to all building improvements. The business of the building contractors and operative builders, the sales of the building supply manufacturers and dealers, and the employment of building craftsmen are all adversely affected by real estate taxes that discourage home building and buying and home ownership, or that force the owners of rental properties to operate at a loss.

Home building is regarded by business men generally as the "bright spot" in the present outlook for sound business recovery. The need for new homes and for modernized old homes and apartments and commercial buildings is very great. *Building costs* and *financing costs* have been reduced and building *efficiency* increased. The result is that the people have really turned building-minded and are ready to go ahead with homes and other improvements in a big way. BUT, they are still tax-conscious. They demand a fairer distribution of local, state and national taxes so that home ownership will be encouraged and not penalized.

In a growing number of states homestead tax exemption laws are now in force which remove the tax expense entirely on low cost homes, thereby encouraging home buying and building, and providing genuine "social security" for the average family. In other states legislation is under consideration or has been enacted to limit the real estate tax to a definite percentage of value.

Economy in local, state and federal government to cut taxes was urged at the regional conference of the National Association of Real Estate Boards at Atlantic City early in May. Over-all limitation of taxes on real estate also found advocates at this meeting. The need for economy in government to ease the burden of taxation on realty was emphasized by most of the speakers, and a wider tax base to relieve real estate was recommended.

Herbert U. Nelson, executive vice president of the national organization, explained that the association made no claim to a program that would solve the general tax problem, but had fought for twenty-six years for a more equitable system of taxing realty. He said he favored the British scheme of taxing real property *on its income* and

suggested a national conference on the problem.

Real estate taxation is definitely a local matter and as such can be directly influenced by the readers of this publication. A fair tax rate based on fair appraisals of income-value will encourage buying and building and will set the stage for a general business revival led by the building industry.

ARE AMERICANS "HOME-MINDED"?

WE HEAR disturbing comments to the effect that Americans are no longer interested in how or where they live. Just give them a fancy automobile, some people say, and that's all they ask. *American Builder* heartily disagrees with this viewpoint and has the following as proof:

"If you should get a moderate increase in pay, how would you spend the money?" was the question asked by a research organization recently of 1,665 factory workers in 16 cities. Over 26 percent said they would spend an increase in making their present home more attractive. Over 11 percent said they would buy or build a house, and 9.6 percent said they would move to a better home. An even 10 percent reported that they would invest in labor saving home equipment; while 34.4 percent would increase their saving account. Only 10.9 percent said they would spend the money in buying a car and 3.8 percent on "taking a trip." The interviews were equally divided between men and women, young and old.

Looks as though there is still a good market for better homes in this country.



"DO THE MONTHLY PAYMENTS INCLUDE THE CAR?"



PROGRESSIVE prefabrication—scientific advance—new products—new "high value" for low cost—in Douglas Fir Plywood house at the Fair.

15 New York World's Fair Houses

Plans, Details and Construction Data for All Town of Tomorrow Homes. "Progressive Prefabrication" of Parts Is Illustrated

COMPARED to the rest of the buildings at the New York World's Fair, the 15 houses in the Town of Tomorrow, shown on the following pages are almost reactionary. But compared to what American builders are erecting in the present market, they are forward-looking, modern, and in a few cases radical.

In a striking way the 15 World's Fair houses illustrate the trend towards "progressive prefabrication"—that is, the use of more factory-built parts that save time and labor on the job. This is shown in the extensive use of large panel products, such as plywood, insulating board, the use of factory-built windows. More than half of the houses are of dry-built construction.

Extensive use of factory-fabricated kitchen cabinets, millwork, and a host of other products is made. Heating units are more complete and compact, delivered to the job as one assembled unit. The houses strikingly illustrate the contribution of modern science and industry to the modern home to give the buyer "More House for the Money."

The 15 houses are attractively grouped around a winding street in a community called the Town of Tomorrow. There are several interesting little low-priced cottages as well as more expensive fully-equipped homes. Modern and traditional designs are attractively blended.

Construction was performed by the World's Fair building staff under the direction of Otto Teegan of the firm of Scott and Teegan. Builders interested in erecting one of the World's Fair houses in their own community can obtain blue prints and specifications by writing direct to the architects or by getting in touch with the World's Fair, Shelter Exhibits Section, Administration Building, World's Fair, New York.

HOUSE OF VISTAS

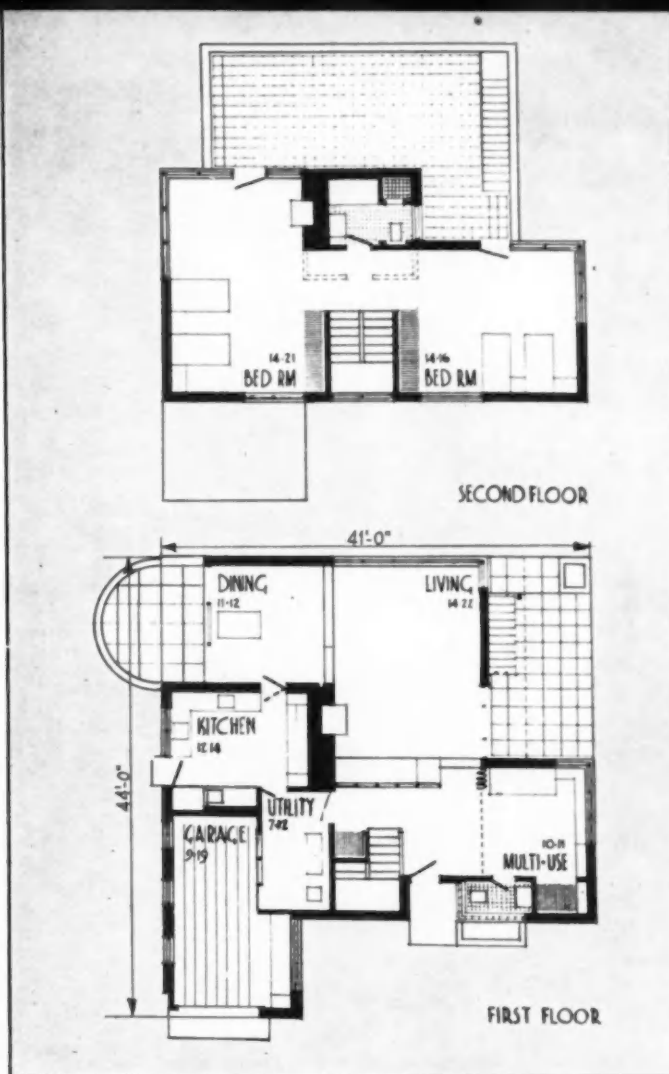
MODERN AND TRADITIONAL HOUSES have been successfully intermingled in the Town of Tomorrow. The house below designed by architect Vernon Walter Johnson is one of the most extremely modern in the group. While the exterior is severe, the interior has been made very livable with a dropped-floor living room, a semi-circular terrace off the dining alcove and a large canvas canopied deck on the second floor.

INTERIOR ARRANGEMENT of floor plan provides spacious, well-lighted rooms. The entrance hall is screened from the living room by a panel of glass brick. Since there is no basement, a utility room between kitchen and garage houses heating plant, laundry and workbench. A medium sized room off the entrance may serve as guest room or study.

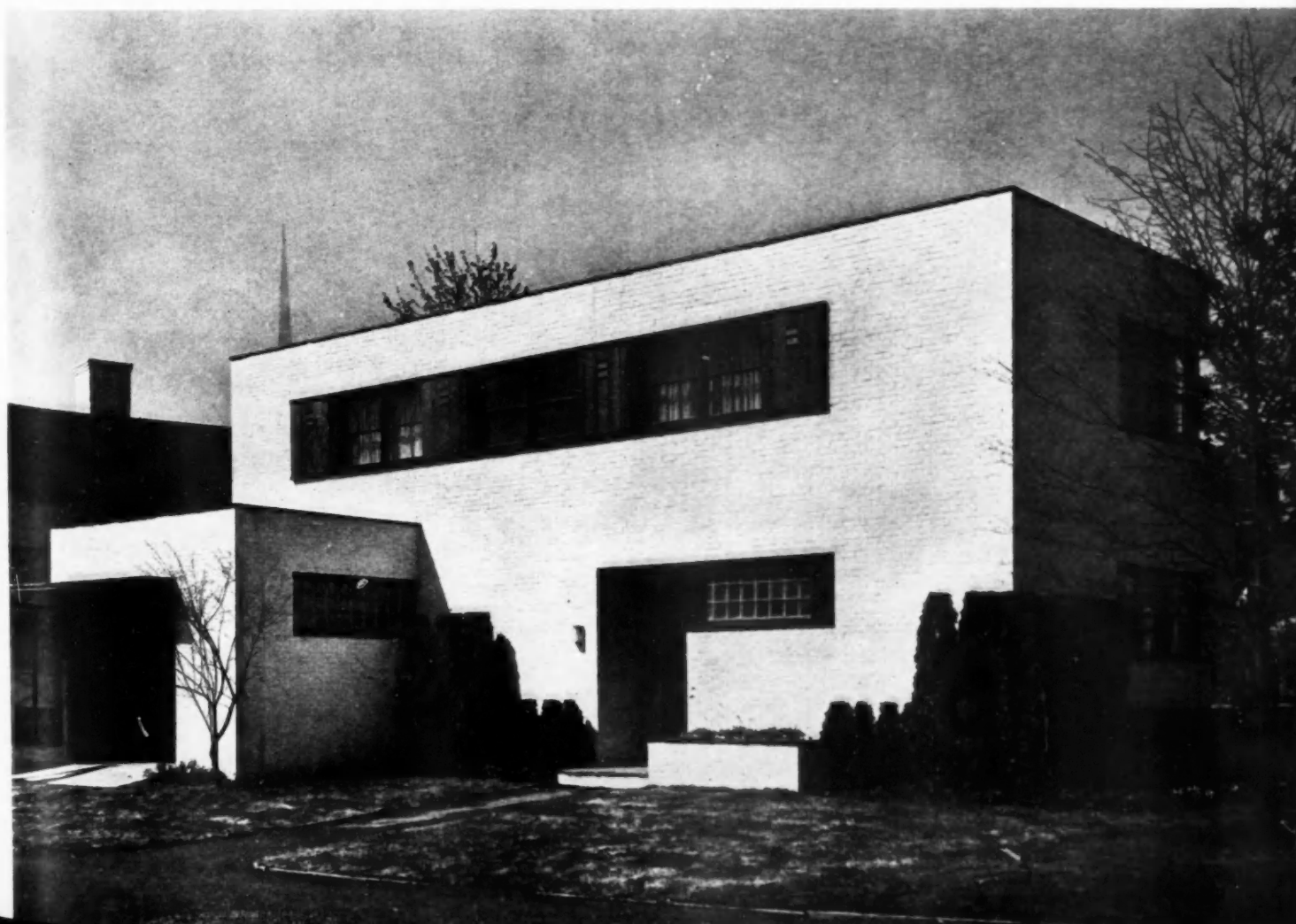
SPECIAL FEATURES INCLUDE: Craw-Fir-Dor one piece upward acting door, Barrett specification roof and deck tile, Truscon Steel windows, International Nickel "cooking center" consisting of cabinet base and gas range, Whitehead automatic gas storage water heater, Luminall interior wall paint.

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The Cost FIGURES
FOR THIS HOUSE
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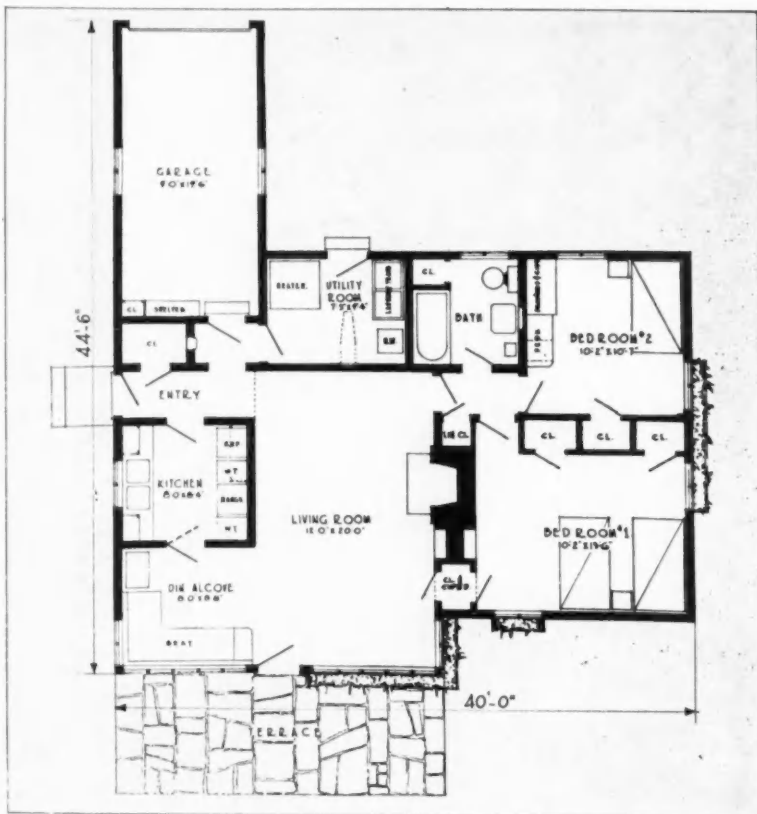


STRAIGHTFORWARD MODERN DESIGN with well arranged livable interior. Large dropped-floor living room at rear overlooks garden.





THICK-BUTT HAND-HEWN SHINGLES contribute deep shadow lines and beauty to N. Y. World's Fair House No. 1.



Scientific Lumber Progress

PROGRESS IN BETTER BUILDING is well illustrated in the Double Duty House by the use of guide-line square-cut lumber of exact standard lengths and bundled endless lumber used for wall and roof sheathing and subflooring. Interior door, window trim is packaged, preshrunk, ready-cut.

"DOUBLE DUTY" HOUSE

Compactly Planned So That Every Room Serves Several Purposes

COMFORT and convenience in a small home have been secured in this little Double Duty House. The living room, for example, has a dining alcove which also serves as a study. Two corners of the living room are given over to large expanses of windows so they serve double duty as a sun room. The front bedroom has a carefully worked out service wall with a work desk and home sewing room equipped with swinging mirrors. The utility room at rear houses the heating plant and laundry. Even the garage has been given an attractive lining of insulating board and a linoleum floor so that it can be used for ping pong when the car is withdrawn. Henry S. Churchill was the architect.

The Double Duty House presents the following outstanding features, materials and equipment:

COPPER AND BRASS—Anaconda copper tubing, gutters, rain pipes and flashing.

WINDOWS—Andersen Narroline windows and frames combining wood and aluminum; aluminum storm windows.

LAUNDRY—Complete home laundry as part of utility room, including Bendix automatic home laundry unit.

ROOF—Certain-teed Wood-Tex shingles in blend of soft green colors. Extra thick butts give heavy shadow line.

MEDICINE CABINETS—Two medicine cabinets, a linen closet and laundry chute leading to utility room are featured. All-steel Venetian style medicine cabinet with full mirror door supplied by Columbia Metal Box Co.

FLOORS—Corinco cork flooring provided by Cork Insulation Co. provides warm, non-slippery sanitary surface which is easy to keep clean.

FIREPLACE—Scientifically designed Heatilator metal

fireplace saves fuel bills, contributes to air circulation.

VENTILATING FANS—Kitchen is ventilated by an 11g electric fan. House is cooled with an 11g attic fan.

GLASS—Libbey-Owens-Ford "Window Conditioning"—modern version of the thrifty storm window. Libbey-Owens-Ford plate glass mirrors used throughout.

HEATING—Mueller Climatrol Jr.—gas-fired winter air conditioning furnace.

DOOR CHIMES—Rittenhouse "President" model electric door chime sounds two rich harmonious notes.

LINOLEUM—Sloane-Blabon Co.

CIRCUIT BREAKER—Square D Multi-breaker service and load center.

TRIM—Preshrunk, packaged interior trim by Trimpak Corp., delivered to job ready for use.

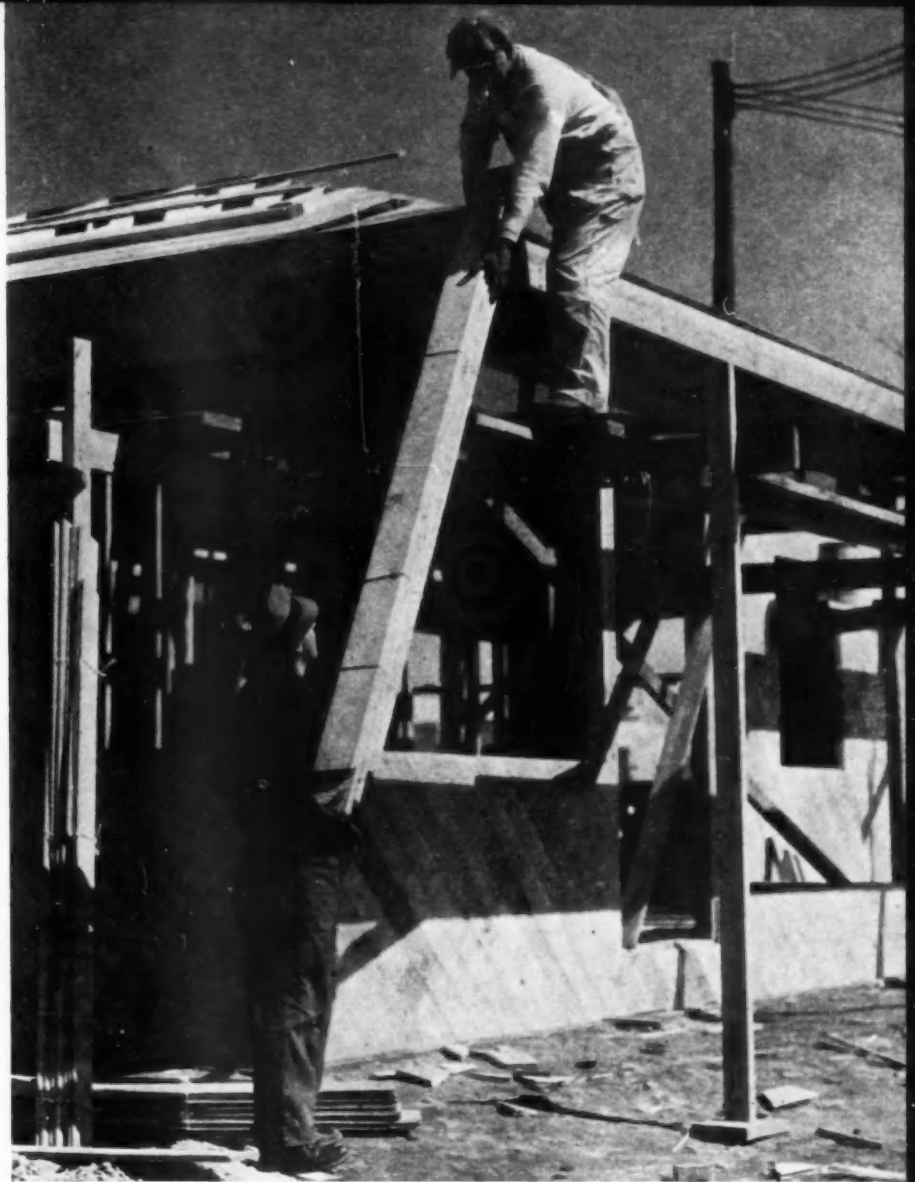
EXTERIOR SHINGLES—Hand-hewn, thick butt Kolorite processed red cedar shingles by Weyerhaeuser Sales Co.

LUMBER—Weyerhaeuser 4-Square endless lumber for wall sheathing, roof sheathing and subflooring. Also 4-Square guide-line framing and short-cut framing used throughout house.

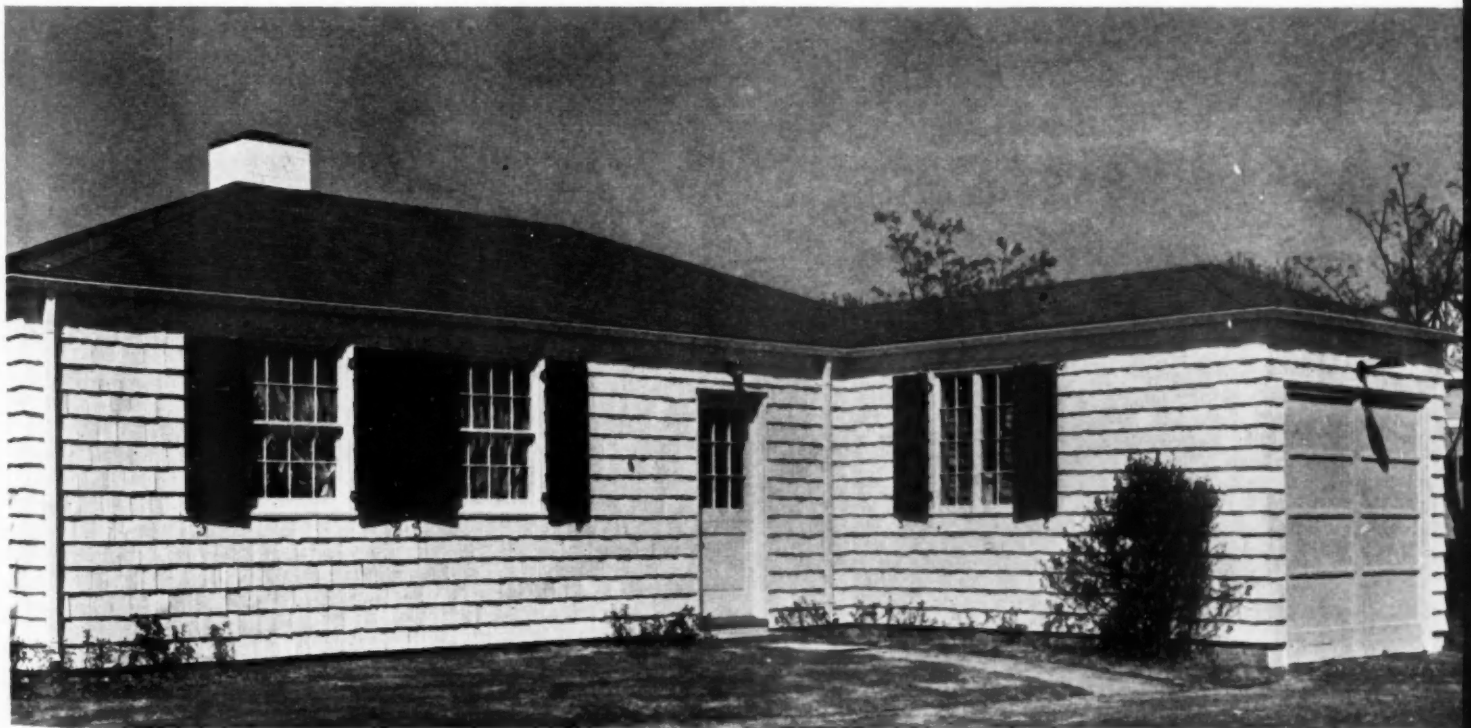
INTERIOR FINISH—Nu-wood fibre interior finish.

INSULATION—Balsam-Wool sealed insulation in walls and roof.

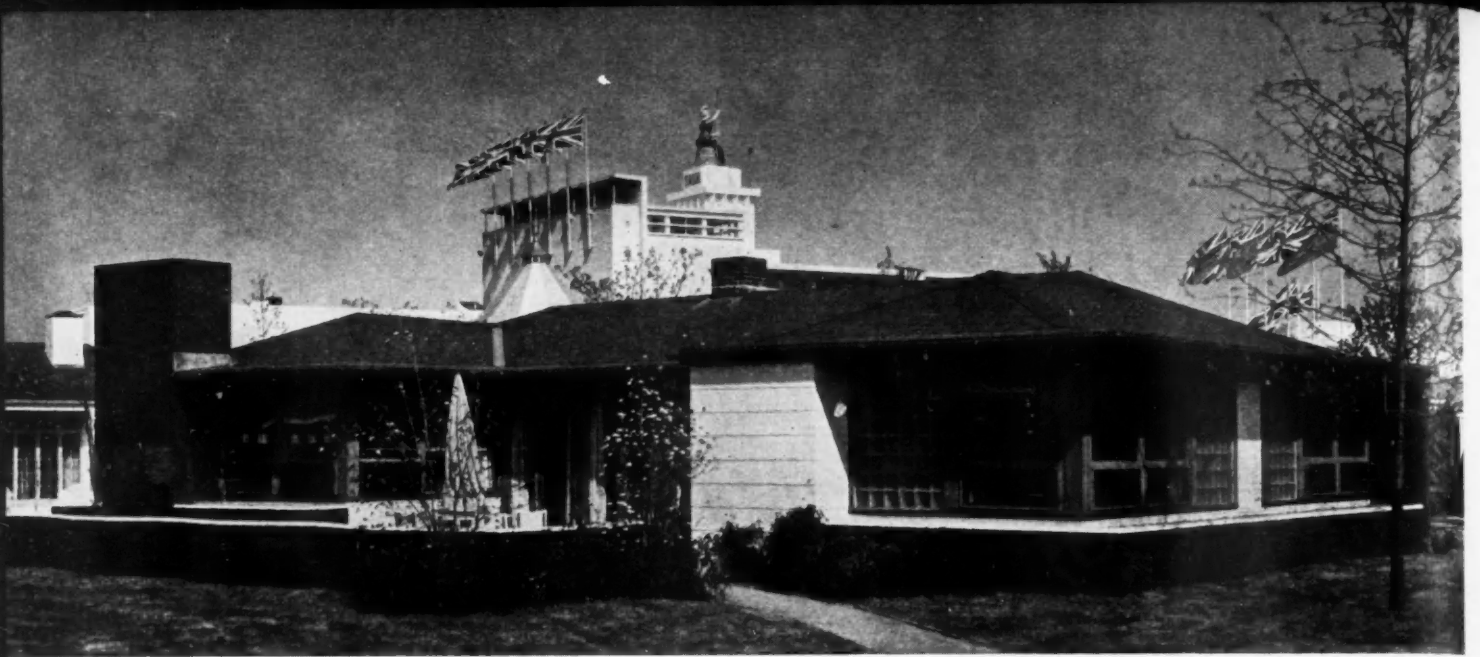
GARAGE DOOR—Craw-Fir-Dor one-piece upward-acting garage door by Crawford Door Co.



PASSING UP A BUNDLE of square-cut endless lumber of assorted sizes used for wall sheathing, roof sheathing and subflooring in the Double Duty House.



REAR VIEW OF DOUBLE DUTY HOUSE showing attractive one-piece Douglas Fir upward-acting garage door.

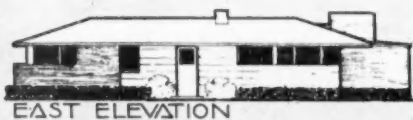
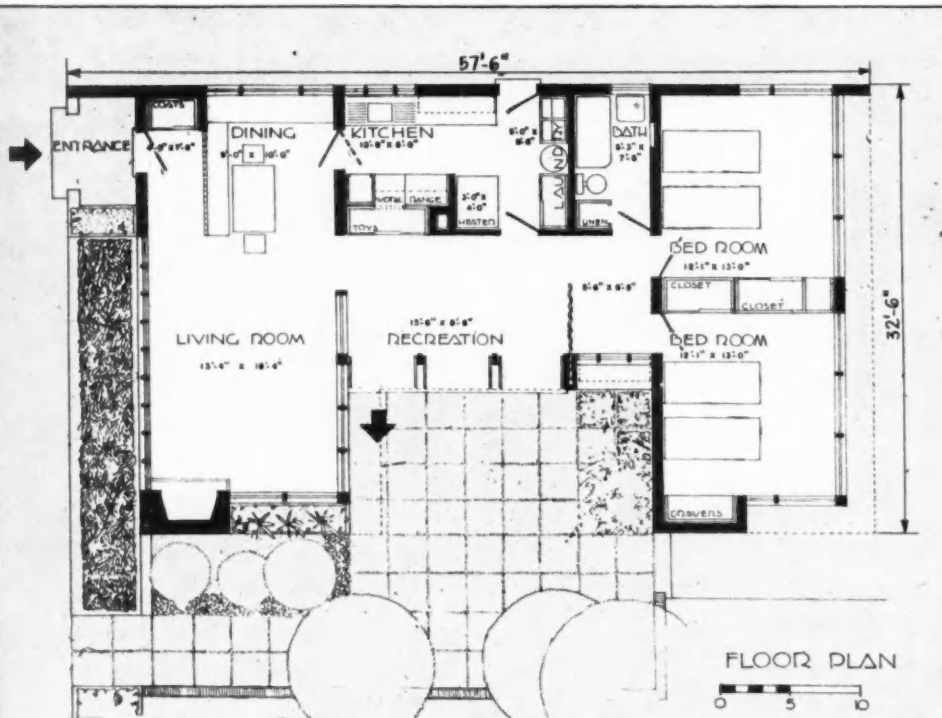


RAMBLING LOW-HUNG BUNGALOW designed by Landefeld and Hatch for a "young married couple."

MODERN BUNGALOW IN BLACK BRICK AND GLASS

THE NEW YORK World's Fair name givers have entitled this "The Bride's House," and the architects, Landefeld and Hatch of New York City, say that it is designed for low maintenance cost and a minimum of housework, such as they feel young married couples desire. Exterior is of reddish-black brick combined with wide expanses of glass brick and plate-glass windows. Black asphalt shingles are used on the roof. There is a well-laid out electric kitchen. The interior is largely finished in redwood. Many of the

floors are covered with cork tile. The floor plan, as detailed below, is unusual but is livable and attractive. One end of the spacious living room serves as a dining alcove with built-in seats. The alcove is separated from the entrance hall by a glass brick wall. A recreation or general purpose room is placed in the middle of the house, separating the bedrooms and bath from the living quarters. The wide eaves provide shade and shelter. A brick enclosed patio is provided.



EAST ELEVATION



SOUTH ELEVATION

Latest in Equipment

KITCHEN—Compact, superservice layout equipped with General Electric unit steel cabinets, dishwashing sink and Disposall, electric range, refrigerator, clock and exhaust fan. Walls are finished with colorful wallpaper, floors in deep-red in-laid linoleum.

HEATING—General Electric gas-fired economy-type winter air conditioner located in utility room adjacent to kitchen.

LAUNDRY—A cheerful, attractive, completely equipped home laundry is installed at one end of kitchen.

GLASS—Owens-Illinois glass block are extensively used, large corner windows are featured. A row of glass block windows are on living room wall set high enough to allow space for furniture.

FLOORS—Cork tile floors by Cork Insulation Co.

WALLPAPER—Modern wallpaper finishes by Wallpaper Institute.

BRICK AND TILE—Structural Clay Products Bureau.

ROOF—Barrett mineral-surfaced asphalt roof, using Giant Rectangular size in blue-black color.

INSULATION—Barrett rockwool bats with vapor-proof building paper overlapping flanges for permanent attachment to studding.



Photos by Norman Cary
 "BRIDES HOME" LIVING ROOM features redwood ceiling, cork tile floors, extensive windows. Row of glass block windows at right set high enough to clear furniture. Black brick fireplace has raised hearth—bringing fire closer to eye level. Landefeld and Hatch, architects.

BEDROOM CLOSETS have sliding doors of natural waxed finish redwood. Modern decorative wallpaper is featured as well as a colorful deep-tone linoleum floor. Note simple redwood trim around openings.



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True Cost FIGURES
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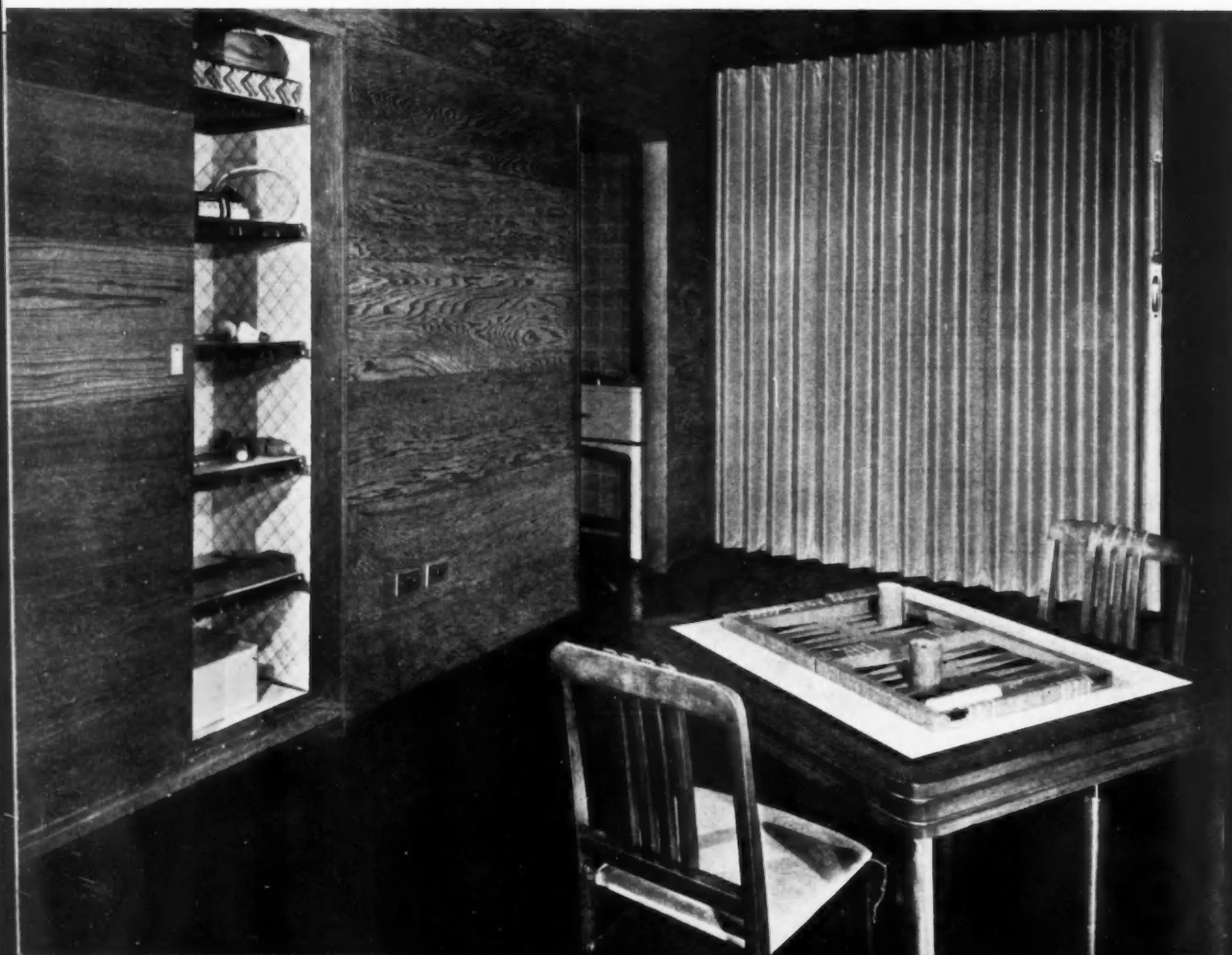


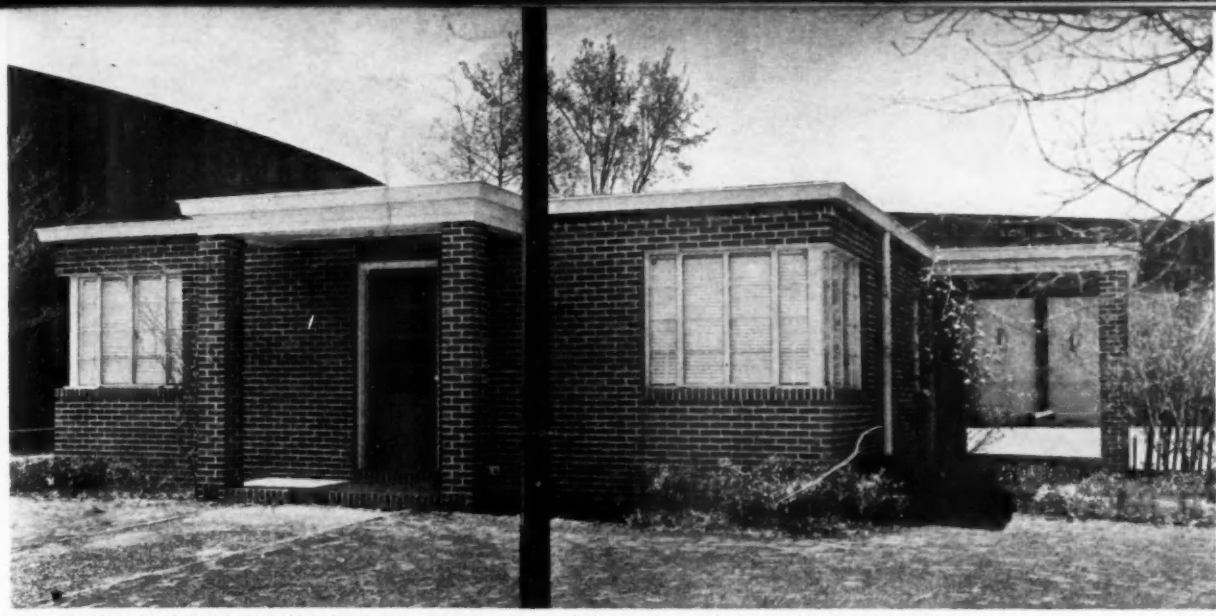
Superservice Bride's Kitchen

THE ALL-ELECTRIC "BRIDE'S HOUSE" KITCHEN is cheerful, efficient, reduces labor to a minimum. View at left shows laundry adjoining (see page 54). View at right is toward dining alcove with built-in seat against glass wall.

Sliding and Folding Doors

RECREATION ROOM OF "BRIDE'S HOUSE" has storage closet at left, with two sliding redwood doors that save space, harmonize with redwood wall finish. At right is seen new-type folding partition.





LOW-COST MINIMUM HOUSE for family of 4, sponsored by Structural Clay Products Institute.

BRICK CAVITY WALL

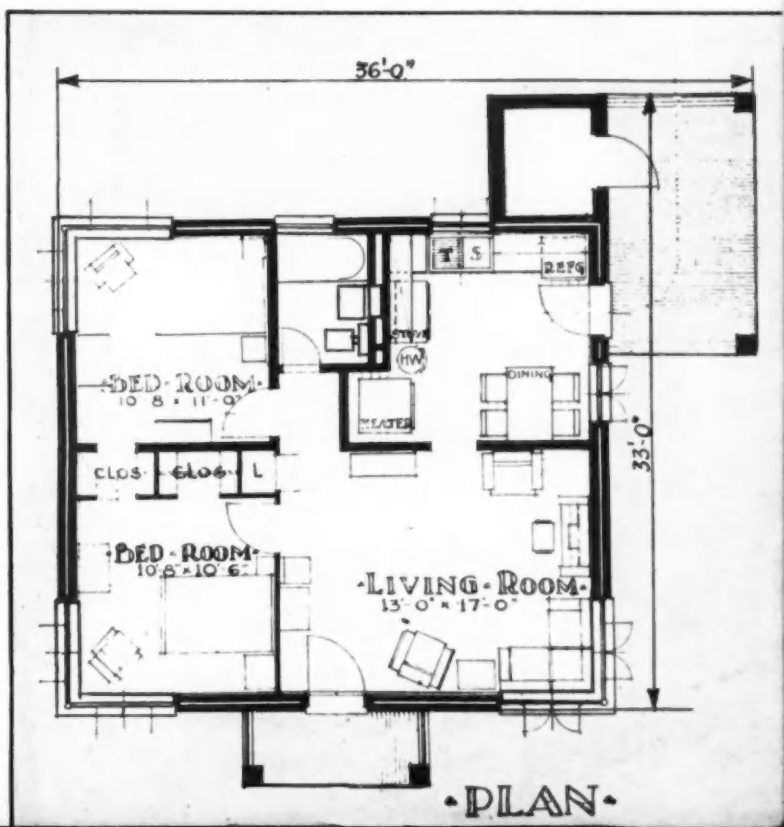
House for Family of 4 Features Low Construction Cost and Low Maintenance. Plaster Applied Directly to Interior Brick

DESIGNED BY GEORGE D. CONNER and sponsored by the Structural Clay Products Institute, this little house is intended to provide minimum accommodations for a family of 4. An important feature is the cavity brick wall construction which has proved so popular in England. Two tiers of brick are laid with a 2-in. air space between, and tied together with frequent metal connectors. The air space acts as a moisture barrier and increases the insulating qualities of the wall. Plaster may be applied directly to the interior brick surface.

FEATURES OF THE HOUSE include a large kitchen with space for dining, a back porch with storage room, heater and hot water unit located in kitchen niche. The flat roof is thoroughly insulated to save fuel and resist summer heat.



PHOTO ABOVE SHOWS BRICK CAVITY WALL under construction, leaving 2-in. air space that prevents passage of moisture and acts as insulating barrier. Note metal connectors to tie the walls.



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True Cost FIGURES
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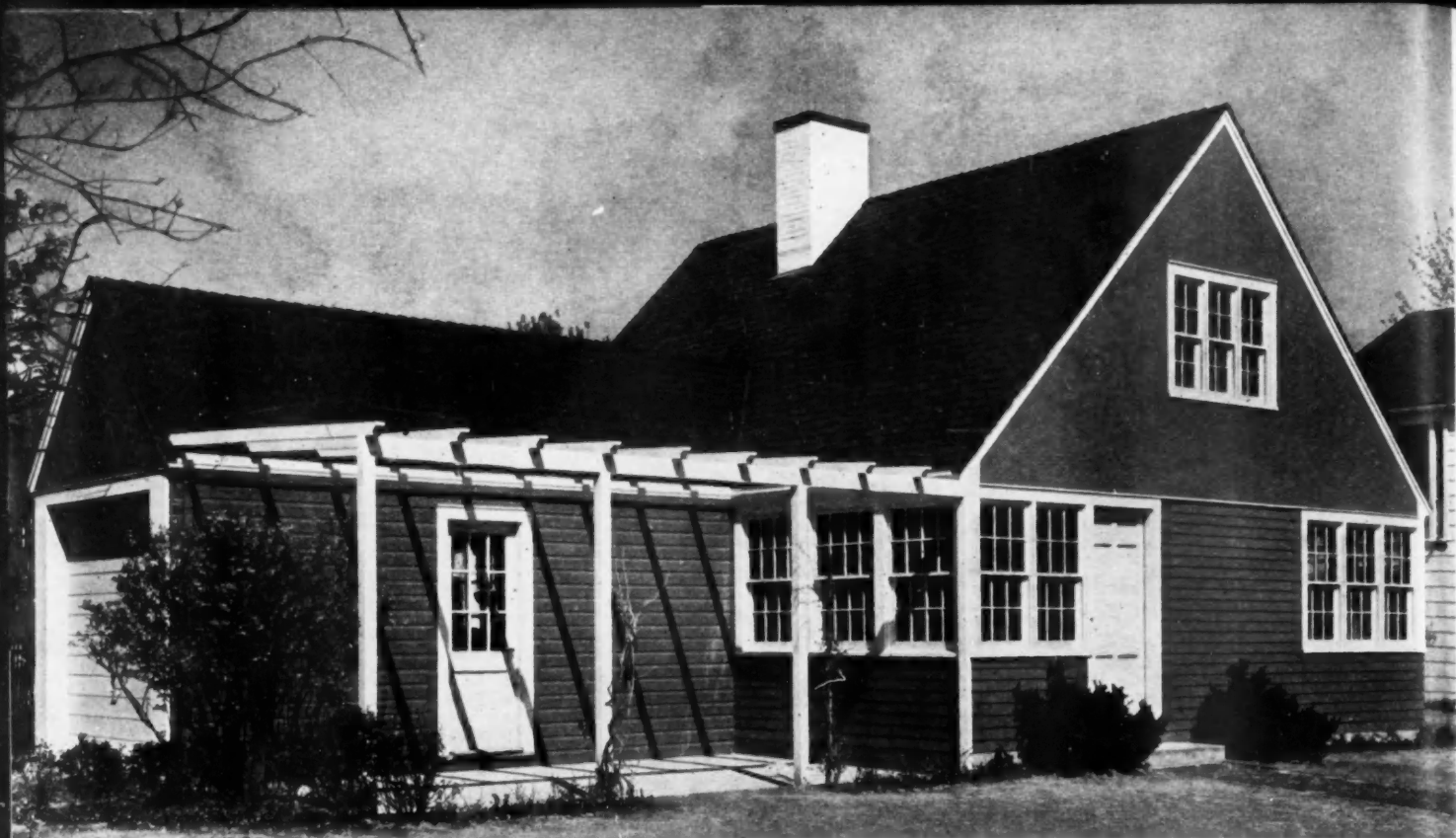


Photo by Norman W. Cary

LOW COST "HOUSE OF MANY WOODS"

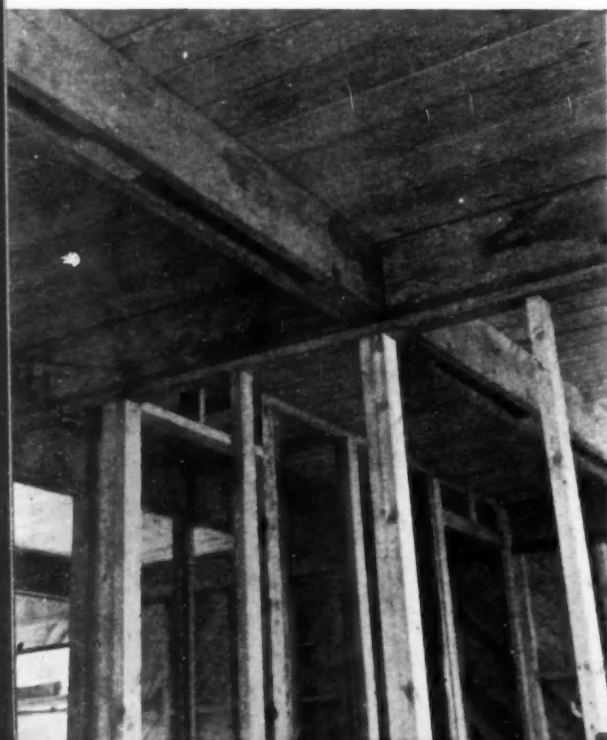
"Scandinavian" Effect Achieved with Vertical Boarding, Bright Colors. New Economy Framing System Features Plank Floors, Truss Roof.

THE "HOME OF WOOD" in the Town of Tomorrow is sponsored by the National Lumber Manufacturers' Association and the National Retail Lumber Dealers' Association, as part of their Small Homes Demonstration Program. Architects Evans, Moore and Woodbridge took the minimum low-cost Demonstration Home No. 1, added a garage, increased the pitch of the roof and gave it an

exterior appearance that can best be described as "Scandinavian." Outstanding structural features are the 2-inch plank floors with girders and roof trusses on 7-foot centers, as detailed on the opposite page. This economy framing method is claimed to greatly reduce the number of pieces of lumber that have to be handled, permits use of lower grades, and at the same time gives a more substantial, warm construction.

Exterior is of beveled siding, with vertical flush boarding in the gable. The walls are deep red with white trim. The red cedar shingle roof is stained black.

Rooms inside are each paneled in a different wood including Southern Pine, Idaho White Pine, birch, red gum and cypress.



UNDER-SIDE of second floor (left) showing use of 2-in. planks laid over girders spaced 7 ft. apart.



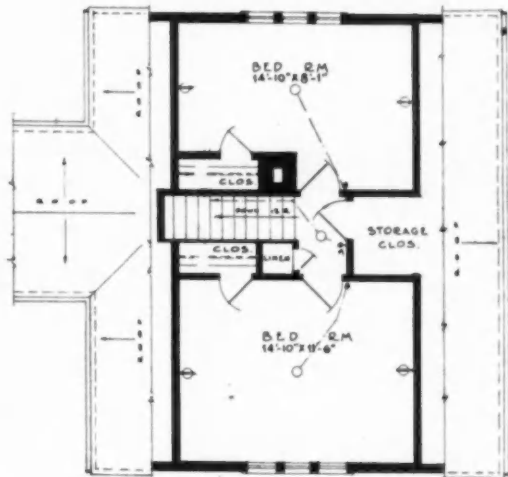
ATTRACTIVE Overhead garage door of vertical beveled lumber (at right) featuring "Miracle Wedge" overhead equipment.

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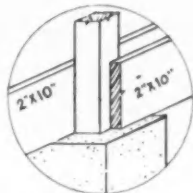
FRONT ELEVATION



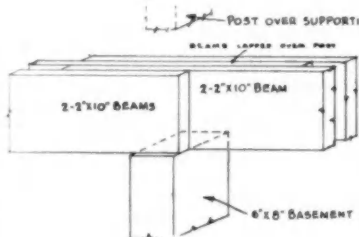
SECOND FLOOR PLAN



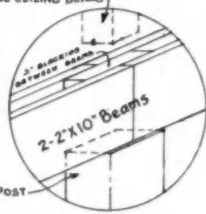
BEAM BEARINGS AT OUTSIDE WALL



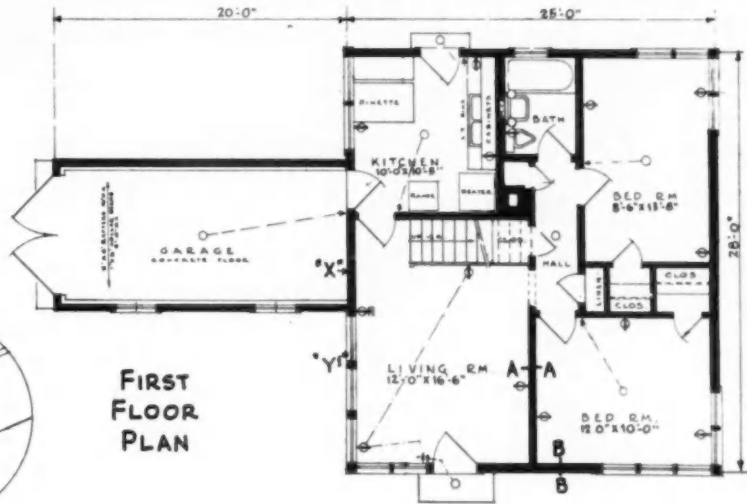
DETAIL OF POST AND BEAM
LEDGER ON MASONRY PIERS



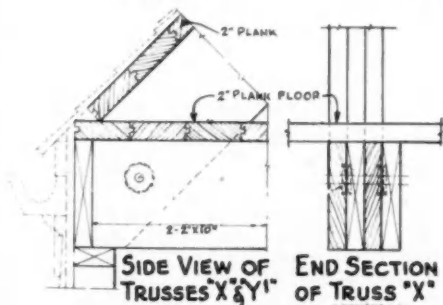
VIEW "Y"



VIEW "Z"

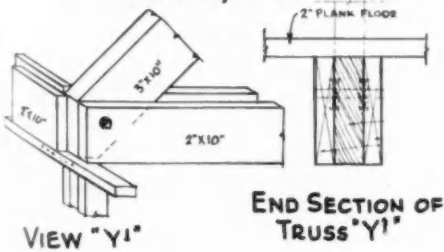


FIRST FLOOR PLAN



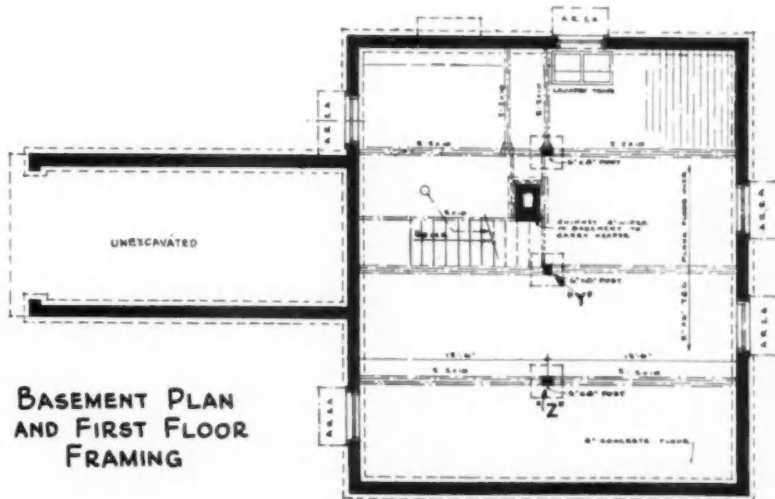
SIDE VIEW OF
TRUSSES "X" & "Y"

END SECTION
OF TRUSS "X"



VIEW "Y"

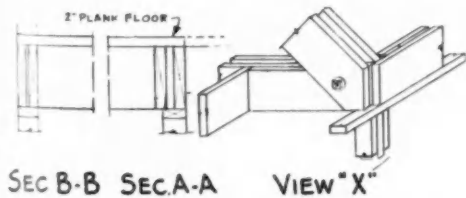
END SECTION OF
TRUSS "Y"



BASEMENT PLAN
AND FIRST FLOOR
FRAMING

2-Inch Plank Floors—Truss Roof

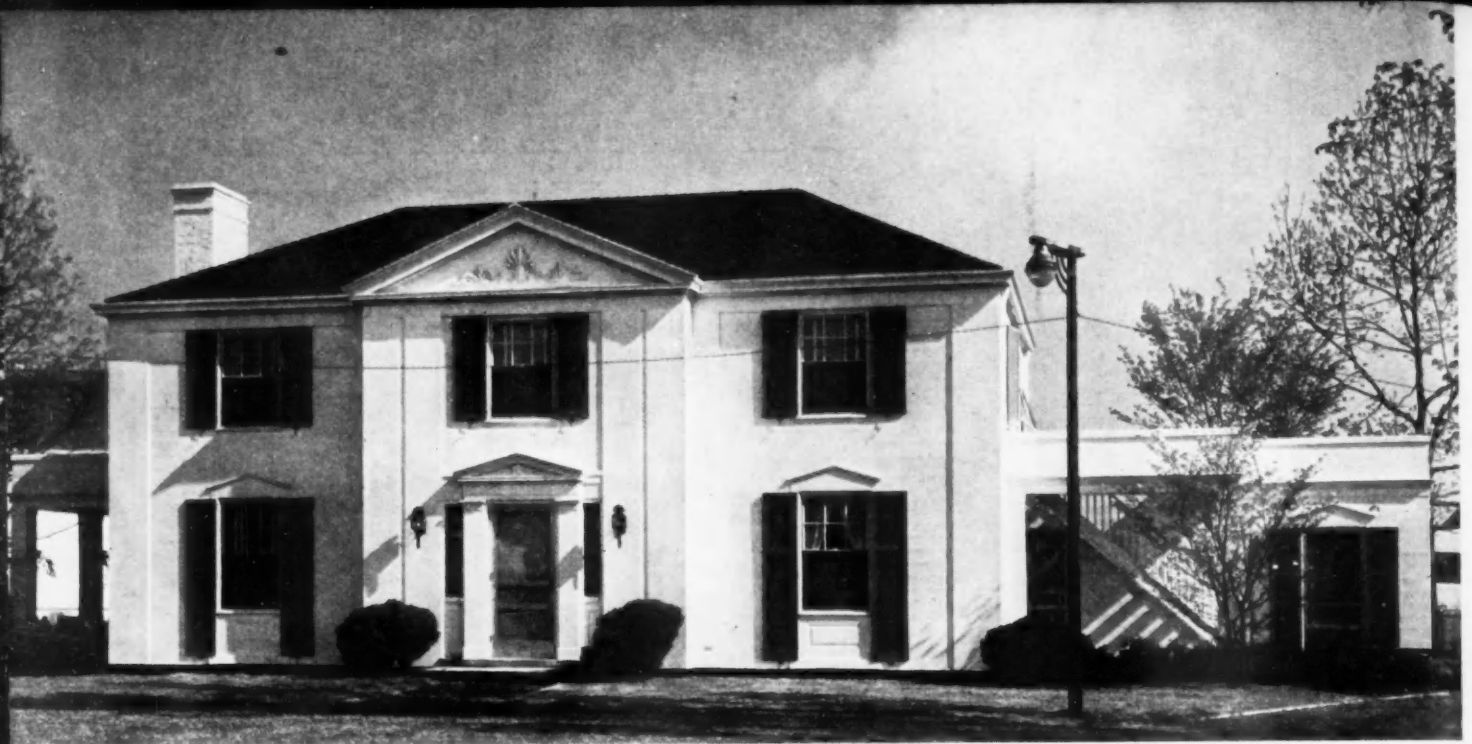
CONSTRUCTION DETAILS of low-cost wood house, showing how economy is achieved by using 2-in. plank floors and roof. The customary joists and rafters are replaced with girders and roof trusses spaced 7 ft. apart. Pieces that carpenter must handle, saw and nail are fewer. Evans, Moore and Woodbridge, architects.



SEC B-B

SEC A-A

VIEW "X"



FLUSH-BOARD SUGAR-PINE SIDING, dark-stained red cedar shingled roof and gray shutters contribute to charm of "The Electric Home."

GEORGIAN ALL-ELECTRIC HOME

DESIGNED ALONG SIMPLE GEORGIAN LINES, with sugar-pine flush-board siding, this house is imposing both inside and out. The architect is James W. O'Connor of New York. Floor plan is spacious with a large center hall, spiral staircase, and living room and dining room opening on a porch and terrace. The house was sponsored by General Electric Company. Special features include the following:

EXTERIOR PAINT—Benjamin Moore outside white; black shingle stain.

INSULATION—Kimberly-Clark Kimsul expanding blanket-type insulation in walls and roof.

SCREENS—Extruded aluminum, Orange Screen Co.

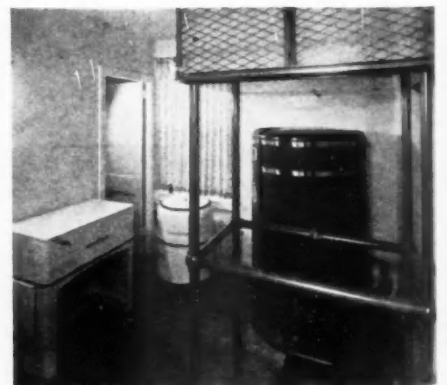
GLASS BLOCK—Owens-Illinois Insulux glass block in dining room and one bathroom, and side of front entrance.

HARDWARE—Sargent & Co. Georgian design, cast bronze.

HEATING—General Electric oil furnace; Warren Webster lightweight concealed radiators.

KITCHEN—Complete G-E planned kitchen with electric range, refrigerator, clock and fan. The one-piece cabinet sink unit has dishwasher and garbage disposal unit. G-E kitchen cabinets are used.

LIGHTING—Lightolier Colonial and Georgian fixtures, selected for adequacy of lighting quality and then checked



ABOVE, Oil furnace with conditioning unit.

LEFT, FULL-TILED walls, well planned cabinets, electric range, and dish-washing sink.

AMERICAN BUILDER
True Cost FIGURES
FOR THIS HOUSE
ON PAGE

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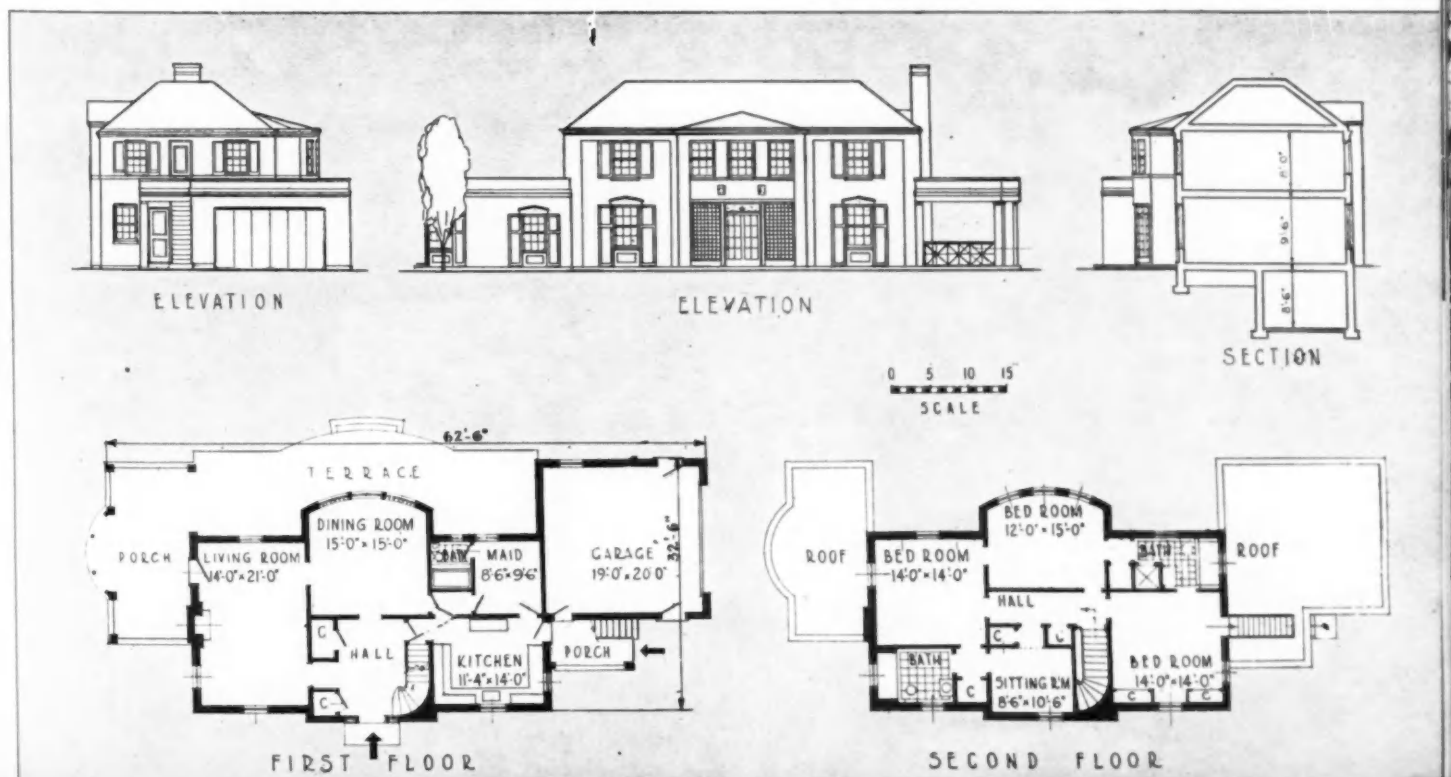
Photos by Norman W. Cary

AMPLE OUTLETS and scientific lighting contribute to the beauty and convenience of "Electric Home" living room with simple Georgian fireplace.

by engineers of National Better Light-Better Sight Bureau.
 SHOWER CABINET—Fiat Metal Manufacturing Co.,
 36" x 36" metal cabinet with precast terrazzo floor and
 glass door. Modern design Crane plumbing fixtures.

FLOOR AND WALL TILE—Robertson Art Tile Co.
 WIRING—G-E wiring and devices installed according
 to recommendations of National Adequate Wiring Bureau.
 Complete installation for "electrical living."

FLOOR PLAN features a spacious center-hall arrangement with living and dining rooms opening out upon a porch and paved terrace.





FEATURING shake-textured asbestos wall shingles and Curtis entrance.



DRY WALL INTERIOR CONSTRUCTION features use of decorative insulating board.

LONG ISLAND COLONIAL WITH HOME WORKSHOP

COLONIAL WOODWORK rivals the fine hand-carved work of early American builders.



Outstanding Features

ARCHITECTURE—Long Island Colonial design resembling homes built on Long Island by Dutch farmers a century ago. Interior design inspired by Colonial homes of Old Williamsburg. Godwin, Thompson and Patterson of New York, architects.

PLAN—Suitable for narrow lot, garage at rear. Has home workshop, well located kitchen with maid's room and bath at rear. There are 3 bedrooms and 2 baths upstairs.

EXTERIOR WALLS—Johns-Manville shake-textured asbestos shingles on front and rear-wing walls. End walls of common brick laid over Steeltex wire mesh backing.

ROOF—J-M cedar-grain asbestos shingles.

INSULATION—This is a J-M "Triple Insulated" house with 4-in. Super-Felt Rock Wool insulation in walls and attic roof.

WOODWORK—Described also as the "Curtis Woodwork House," the complete line of Curtis Companies products is represented. Windows are factory-built Silentite windows, both double-hung and casement. Also included is the new Curtis Circle Sash—"Rotovent." The beautiful modern Colonial woodwork rivals the handiwork of the old Colonial craftsmen. Several of the new stock Curtis woodwork items specially designed by Architect Dwight James Baum are featured. Ponderosa Pine used in windows, shutters, doors and casework.

KITCHEN—Scientifically laid out, colorful kitchen with decorative Flexboard walls of deep rose and gray Flexboard ceiling. Curtis sectional cabinets arranged in step-saving plan.

Other products and equipment include Stanley upward-acting door, Crane bathroom fixtures, Colonial hardware by American Hardware Corp., American Gas Ass'n all-gas home.

SEE PAGE 83
FOR MODEL HOME
WORKSHOP STORY



SIDE ENTRANCE to Triple Insulated "Tomorrow Town" house. Roof is of cedar-grained asbestos shingles. Side entrance provides convenient garage connection.

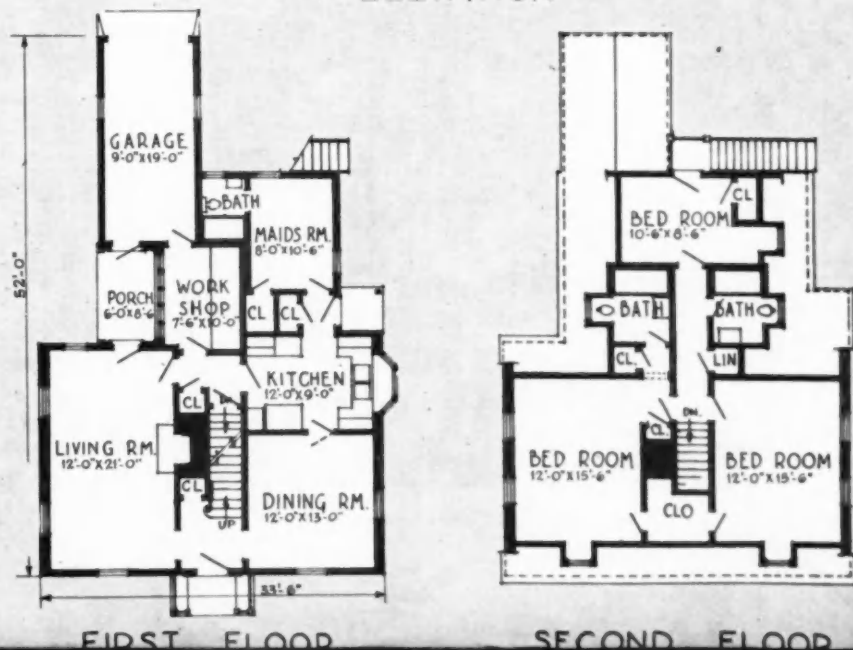
AMERICAN BUILDER
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FLOOR PLAN is suitable for a narrow lot, with 2-car garage at rear. Living room has windows on 3 sides. Kitchen is conveniently located, with adjoining maid's room and bath. The Home Workshop features Stanley tools. (See details page 83.)



ELEVATION



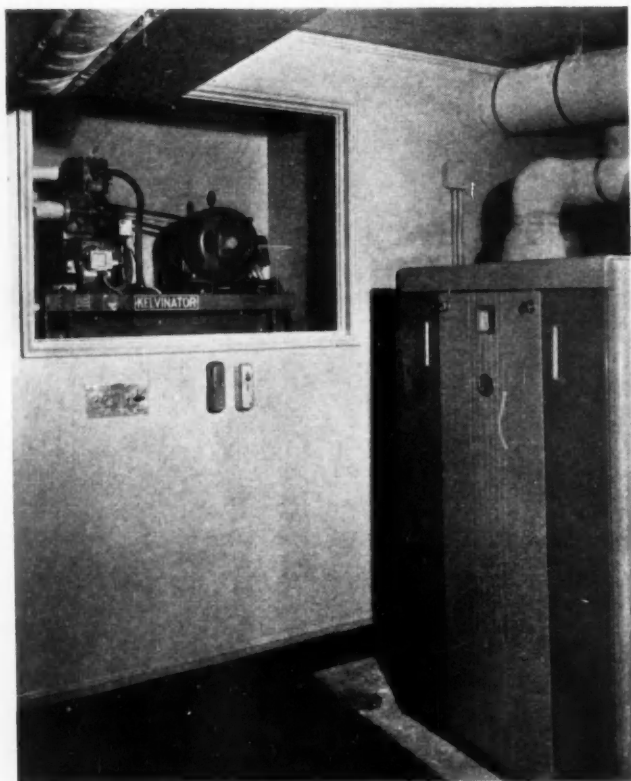
FIRST FLOOR

SECOND FLOOR



Photo by Norman W. Cary

AUTHENTIC COLONIAL woodwork and details make this substantial New England home a winner for homes of today and tomorrow.



REFRIGERATING and heating units in air-conditioned house.

MODERN AIR CONDITIONED HOME

THIS TRADITIONALLY COLONIAL clapboard house designed by Electus D. Litchfield nicely illustrates that the house of tomorrow will combine the good things of both yesterday and today. The authentic beauty of lovely Colonial design has been retained, but as regards the planning, layout and equipment, the house is as thoroughly modern as tomorrow. It is well insulated and fully air conditioned. It was sponsored by Nash-Kelvinator Corp.

TWO SIDE PORCHES and a hallway at the rear are features of the floor plan frequently seen in New England farmhouses. The large living room occupies the entire wing of the house and is balanced on the opposite side by the dining room and kitchen. Servants' quarters and garage are located at the rear of the house. Air conditioning vents are inset in ceilings, in some rooms the light fixture and air vent being combined.

Specification Details

HEATING AND AIR CONDITIONING—Indirect type Kelvinator system. Conditioner contains heating coil, cooling coil, filter, humidifier and fan. Steam for heating coil is provided by automatic oil-burning boiler; refrigerant for cooling coil supplied by Freon water-cooled mechanical cooling unit.

ROOF—Johns-Manville Salem Colonial shingles textured to resemble old weathered wood.

INSULATION—Kimberly-Clark Kimsul expanding, wood-fibre blanket insulation, walls and roof.

PAINT—Keystone Varnish Co. ready-mixed house paint and house primer.

SCREENS—Borg-Warner Ingersoll Koolshade screen of copper wires adjusted so that screening keeps out flies and acts as a Venetian blind.

HARDWARE—Sargent & Co. New England Colonial hardware.

KITCHEN—Kelvinator electric range and refrigerator, International Nickel Monel sink and range hood, Whitehead steel cabinets.

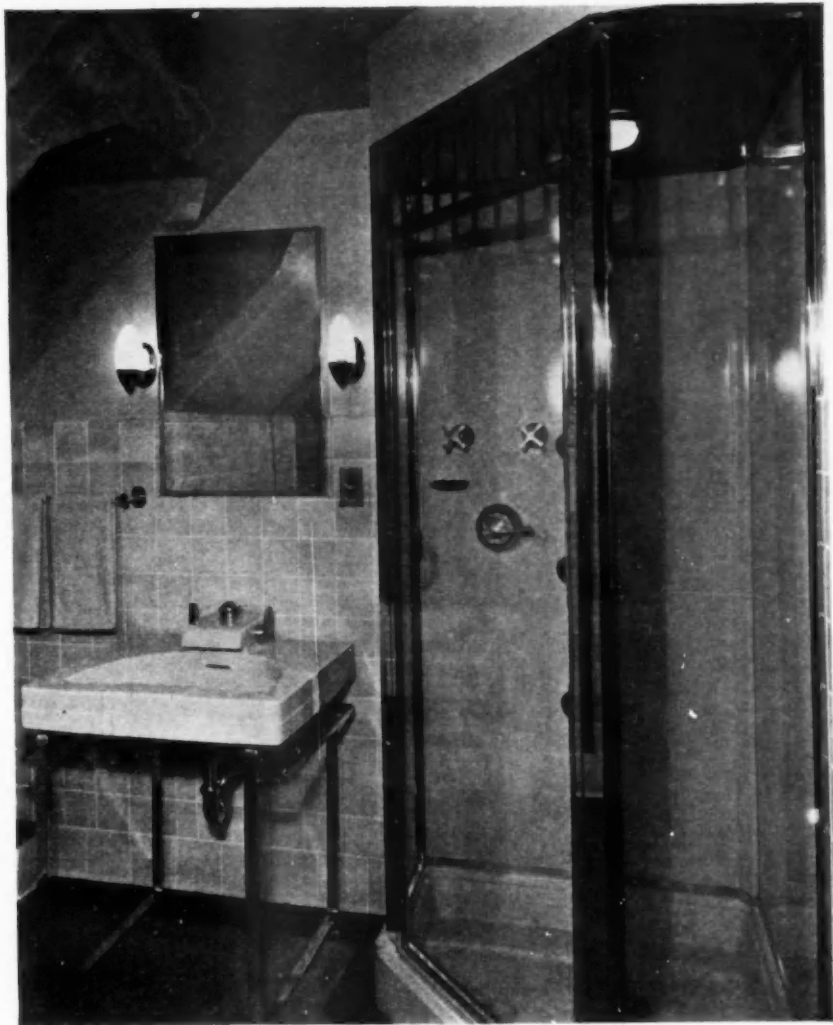
LAUNDRY—Kelvinator electric washer, ironer and water heater.

PLUMBING—Crane plumbing fixtures, Neuvogue lavatory and tub, Siwelco closet.

SASH CORD—Samson Cordage Works.

SHOWER ENCLOSURE—Fiat Metal Manufacturing Co. Corner glass shower with precast terrazzo receptor.

WIRING AND WIRING DEVICES—National Electric Products Corp. products installed according to economy and efficiency recommendations of National Adequate Wiring Bureau.



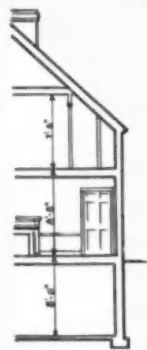
CORNER OF MASTER BEDROOM showing triangular shower stall with precast terrazzo base, modern style lavatory with towel bars. BELOW: Floor plans and details of "Kelvin Home" by Electus D. Litchfield.

AMERICAN BUILDER
True Cost FIGURES
FOR THIS HOUSE
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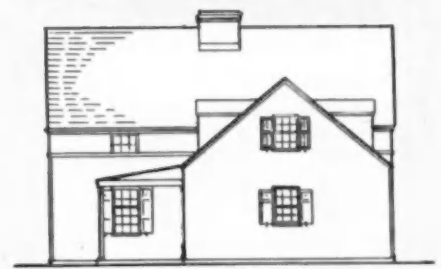
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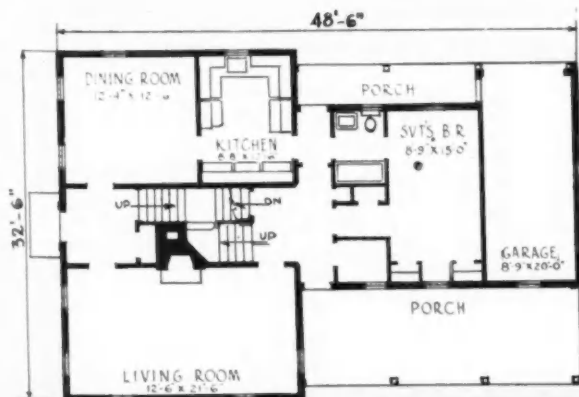
• ELEVATION •



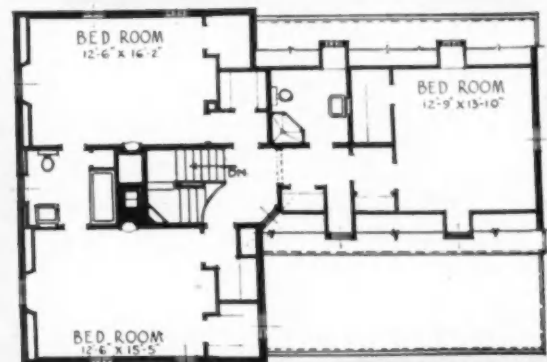
• SECTION •



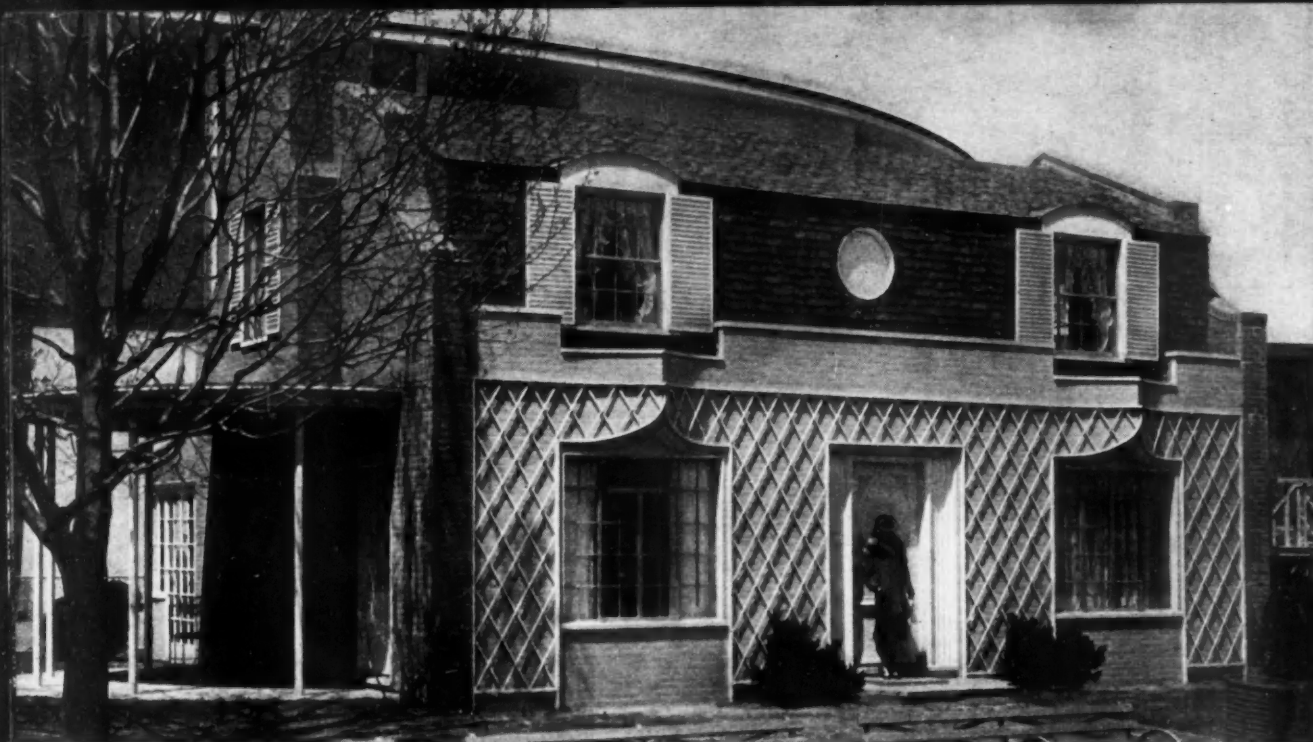
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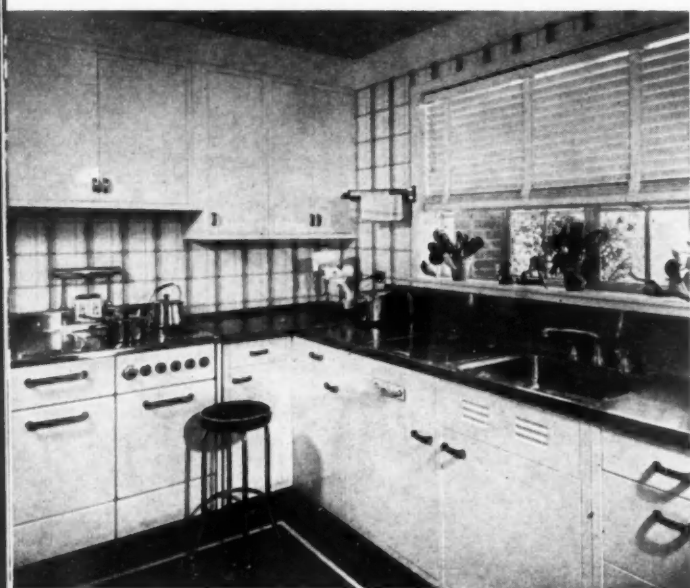
• FIRST FLOOR •



• SECOND FLOOR •



BRICK exterior, reflecting quaint Dutch atmosphere is painted in two shades of light terracotta color. There is a conservatory at rear of house.

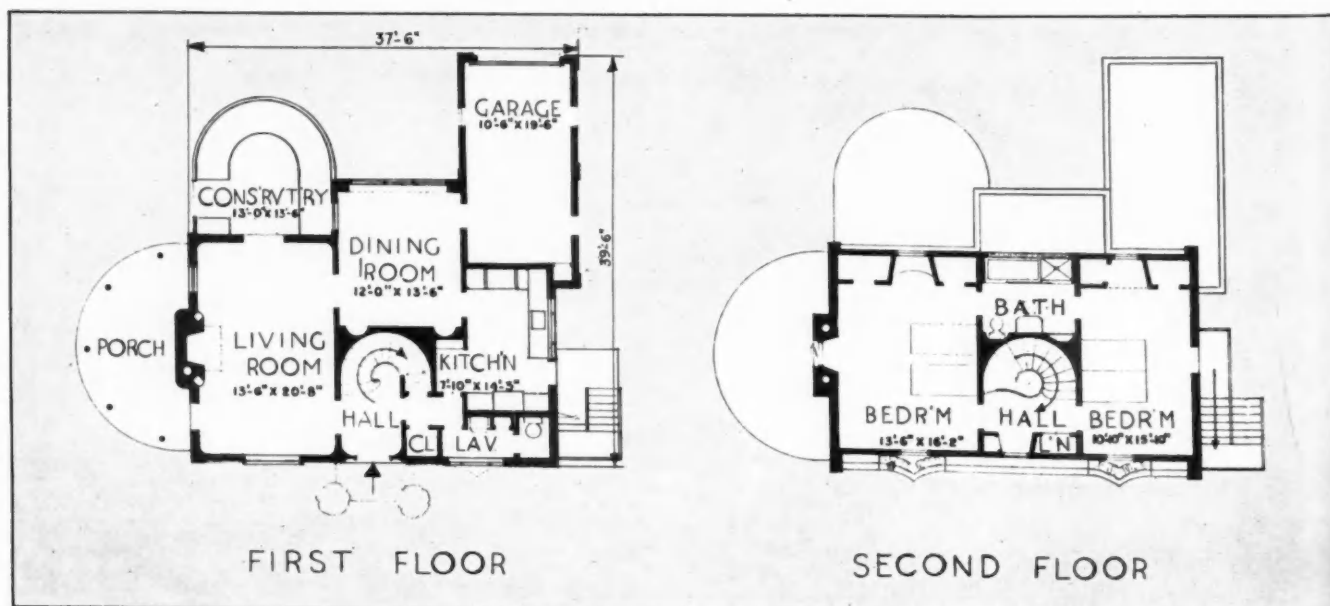


MODEL modern kitchen with monel-metal sink, work top.

TOMORROW'S GARDEN HOME

A WELL-KNOWN WOMAN ARCHITECT, Verna Cook Salomonsky, designed this house and has planned it for a small family who like both indoor and outdoor gardens. An elaborate glass-enclosed conservatory is at rear of house.

FLOOR PLAN provides a charming entrance hall with spiral staircase, and lavatory adjacent. The living room is well proportioned and the dining room has a huge aluminum casement window overlooking a garden. There are two large bedrooms upstairs with a connecting bath, which has an unusual tub and shower arrangement with plate-glass panel in front of tub.



LIVING ROOM of "The Garden Home" looking towards heated glass-enclosed conservatory at rear. The nicely detailed fireplace is the focal point of room, with attractive corner bookshelves on either side. Wallpaper is of interesting design, pale gray-blue on a slate background.



AMERICAN BUILDER
The Costly FIGURES
FOR THIS HOUSE
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THE CHEERFULLY wallpapered dining room is lighted by large aluminum casement windows which look out into the garden. The wallpaper features a newly developed drapery and leaf motif. Even the doors are wallpapered. The furniture and decorations are in French Provincial style.



WINDOWS—Permatite aluminum casement windows by General Bronze Corp.

HARDWARE—Russell & Irwin. Architectural finish hardware of Russwin metal, a composition of nickel and brass.

HEATING—Rome-Turney concealed copper radiation.

KITCHEN—Whitehead Monel dashwasher sink. Cabinets and work counters by International Nickel Co. The Estate stove also has a flush-top Monel surface which fits tight against the adjoining counter top.

LIGHTING FIXTURES—Radiant Lighting Fixture Co. fixtures approved for adequacy by National Better Light-Better Sight Bureau.

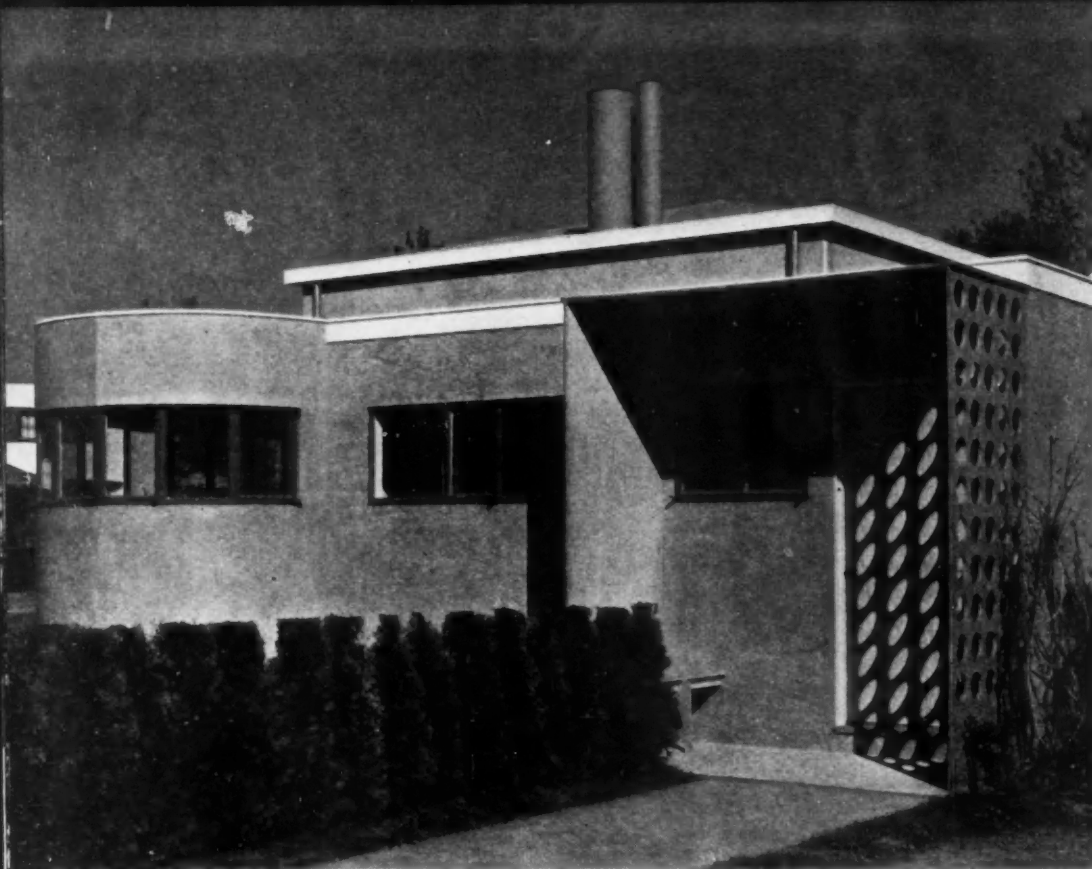
WALLPAPERS—Richard E. Thibaut, Inc., Mura-theme wallpapers carry the same decorative theme throughout the house. The kitchen is papered with a gay plaid pattern in lime, cherry red and marine blue, which harmonizes well with the marine-blue linoleum floor. Bathrooms are papered with washable, white satin-striped paper.

PLYWOOD HOUSE

A. LAWRENCE KOCHER designed the Dri-Bilt Plywood House for the "Town of Tomorrow" selecting an ultra-modern form to express his ideas. The living room has a raised, low-pitched roof. The semi-circular dining alcove gives house a slightly nautical air.

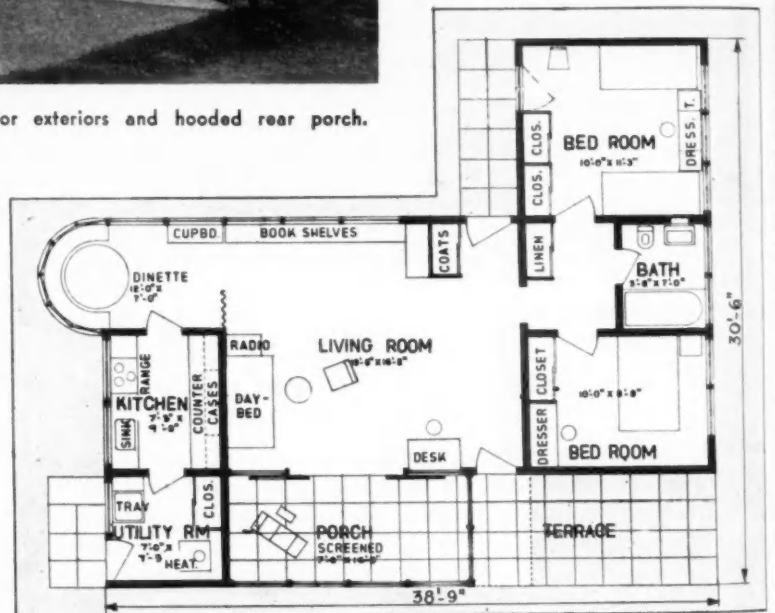
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WATER-PROOF phenolic resin-bonded Plywood is used for exteriors and hooded rear porch.

THE VERSATILITY of Douglas Fir Plywood is interestingly illustrated in the construction of this house which was sponsored by the Douglas Fir Plywood Association. The outside wall covering is of water-proof phenolic resin-bonded plywood with varnish finish. Wall and roof sheathing is of 5/16" Plyscord sheathing. Subfloors are of 5/8" plywood sheathing. The entire interior is executed in Plywall and Plypanel grades of Douglas Fir Plywood. The smartly styled interiors are finished with various treatments of plywood such as V-joint panels in front bedroom, overlay patterns in living room, wallpaper finish in second bedroom.



Photos by Norman W. Cary



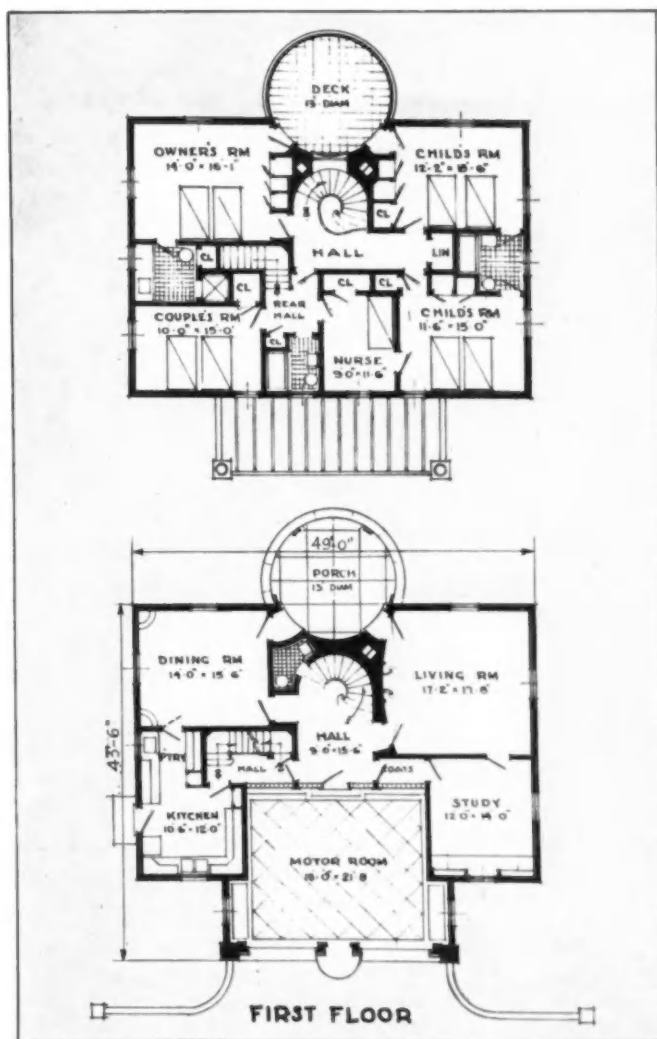


THE SMARTLY STYLED "Motor Room" with ornamental iron detailing forms the center feature of the front. Living quarters are at rear.

MODERN MOTOR HOME

AUTOMOBILE OWNERS of the future will *live* with them as well as ride in them, according to the interpretation of Adams & Prentice who designed this house. The "Motor Room" has been made most attractive with a grilled iron entrance, glass swing-up doors, flag stone floor. The spacious and comfortable living quarters of the house are at the rear with both living and dining rooms opening upon a most attractive circular porch.

Outstanding features of the house include ornamental metal work by J. W. Fiske Co., Stanley swing-up garage doors with glass panels, Barrett tarvia-lithic driveway, Truscon double hung steel windows, Johns-Manville Full Thick rockwool batt insulation, Yale & Towne hardware, Weil-McLain Raydiant radiators, Whitehead steel kitchen cabinets, wallpaper by Stamford Wallpaper Company, Luminall one coat exterior paint, National Chemical & Mfg. Co.



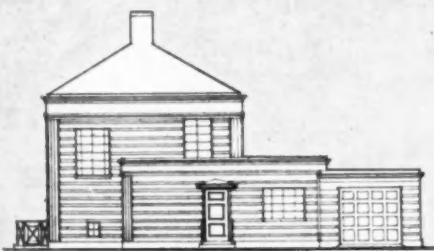


"MODIFIED CLASSIC"

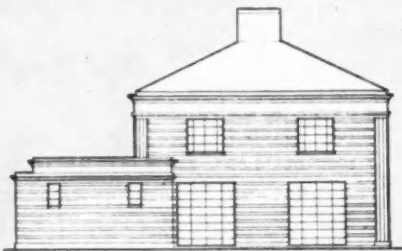
THIS substantial semi-classical house in the Town of Tomorrow, designed by architects Henry Otis Chapman, Jr., and Harold W. Beder, provides a spacious, livable home of eight rooms and three baths. Sponsored by the Celotex

Corporation, the house demonstrates the use of cane fibre materials. Exterior is of 4" lightweight concrete block veneer painted a light gray color with cream colored trim. The kitchen, servant's quarters and garage are separated from the rest of the house by being placed in a separate wing, the roof providing an attractive outdoor deck.

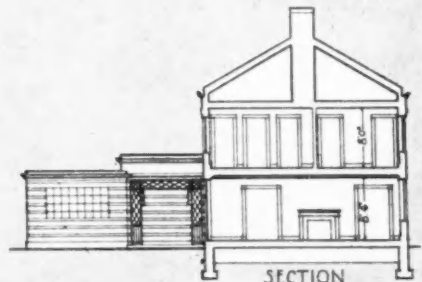
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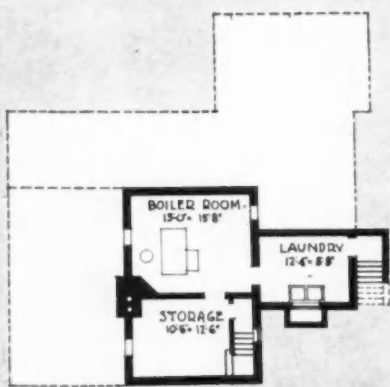
SIDE ELEVATION



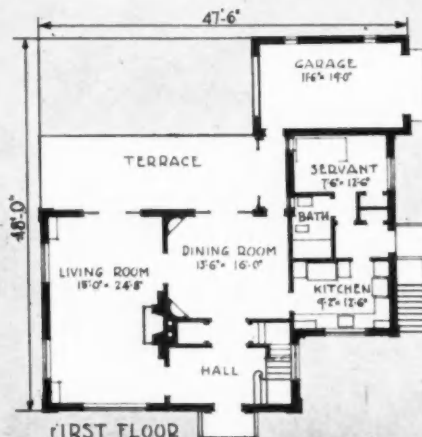
REAR ELEVATION



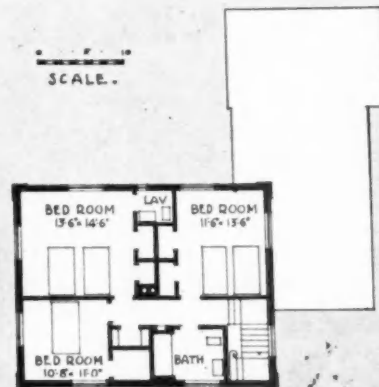
SECTION



BASEMENT

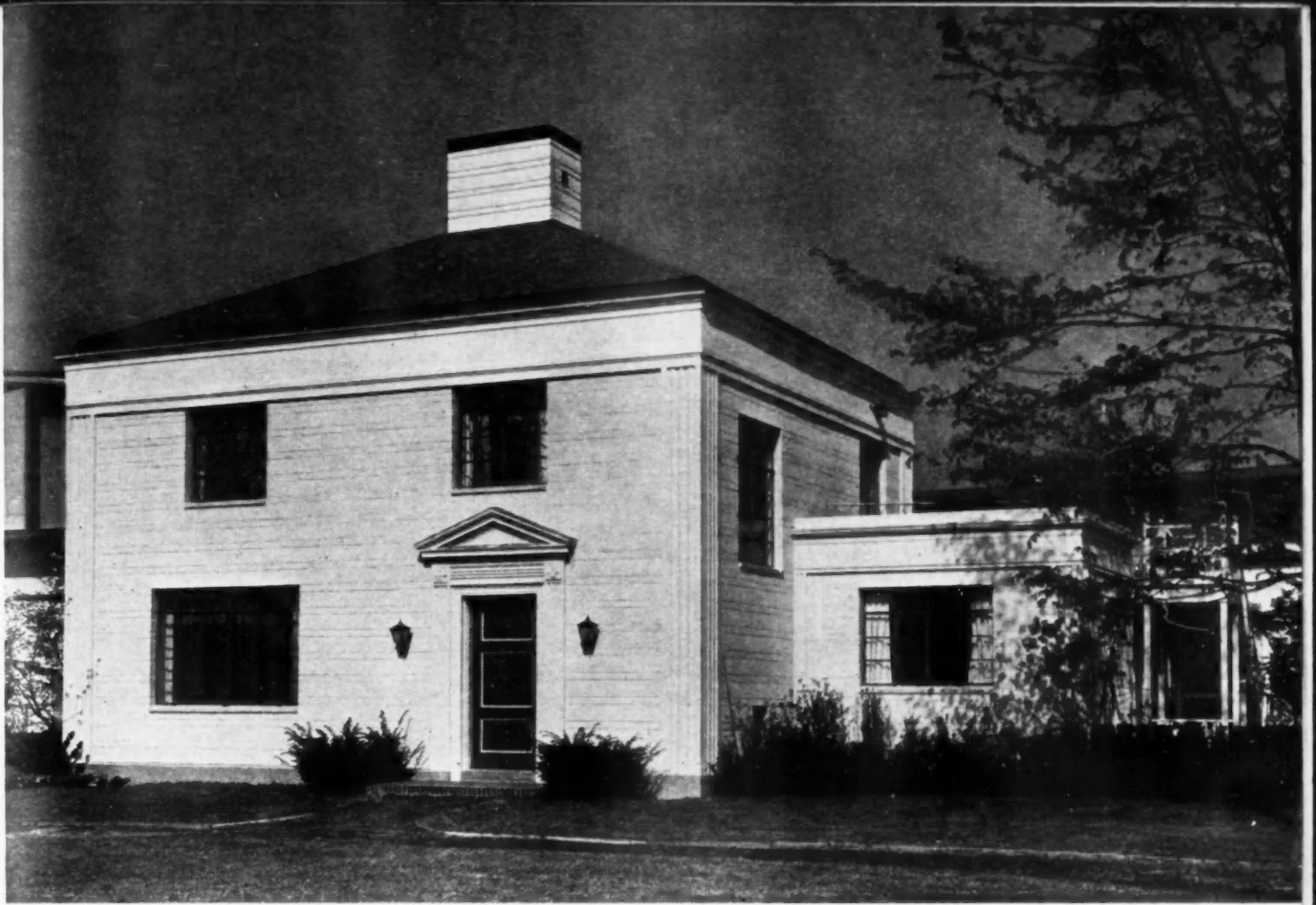


FIRST FLOOR



SECOND FLOOR

SCALE.

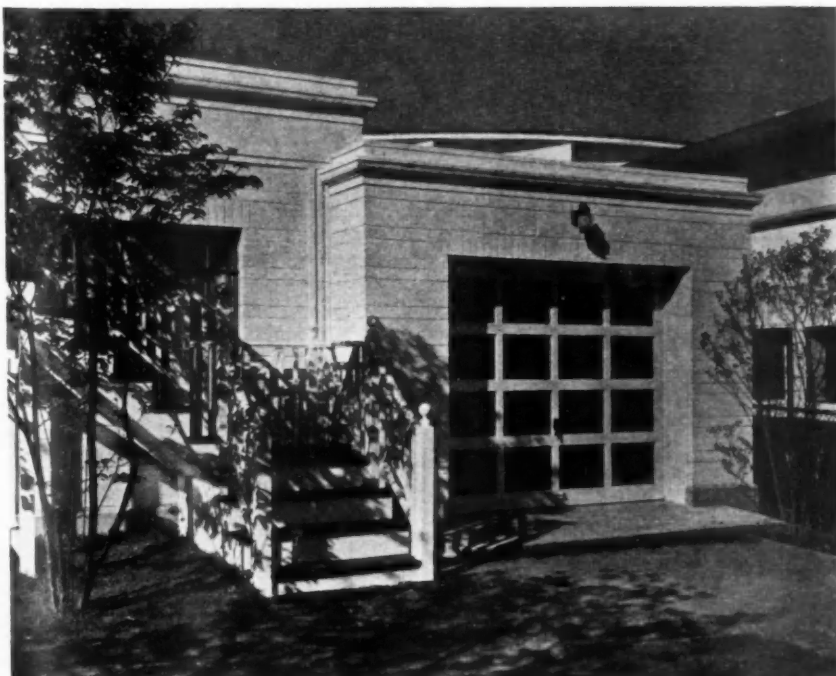


LIVING ROOM of the Celotex House is attractively decorated in semi-formal manner. Walls and ceilings are of cane fibre insulation board. The fireplace is nicely detailed. The large windows at end of room look out over the terrace and garden, entrance to which is provided by way of a covered porch connecting garage and dining room. An outstanding feature of the garage is the large

Overhead door with full glass exposure. The house has three bedrooms, two baths and ample closets upstairs.

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True Cost FIGURES
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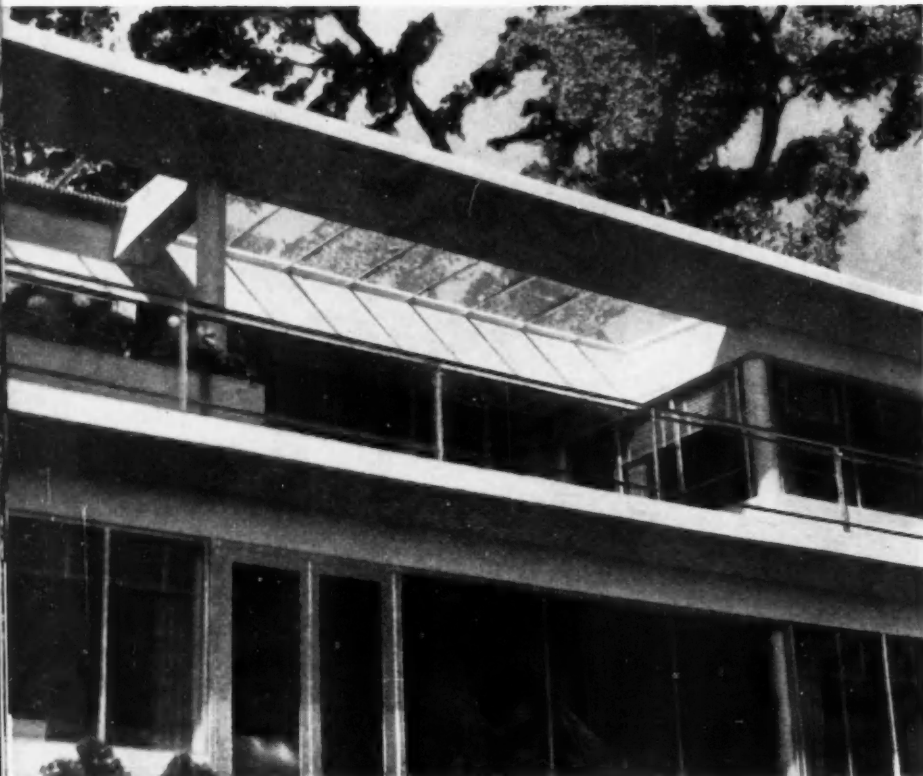
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Special Features

- CONCRETE BLOCKS—4" Pottsco concrete block.
- STEEL WINDOWS—Truscon Steel Company.
- OVERHEAD DOOR—Overhead Door Company.
- WALLPAPER—Wallpaper Institute.
- WIRING—National Adequate Wiring Bureau.
- FLOORS—S. C. Johnson & Son.
- KITCHEN—International Nickel Company.
- PAINT—National Chemical & Mfg. Company.
- ROOF—Celotex Shad-O-Grain Shingles.
- GLASS BLOCK—Owens-Illinois Glass Co.
- ROOF TERRACE—Celotex Traffic Top.
- SHEATHING—Vapor Seal insulating sheathing and insulating lath.
- INTERIOR WALLS—Celotex insulating board, planks, hard board tile.

GLASS, CONCRETE HOUSE of TOMORROW—BUILT TODAY

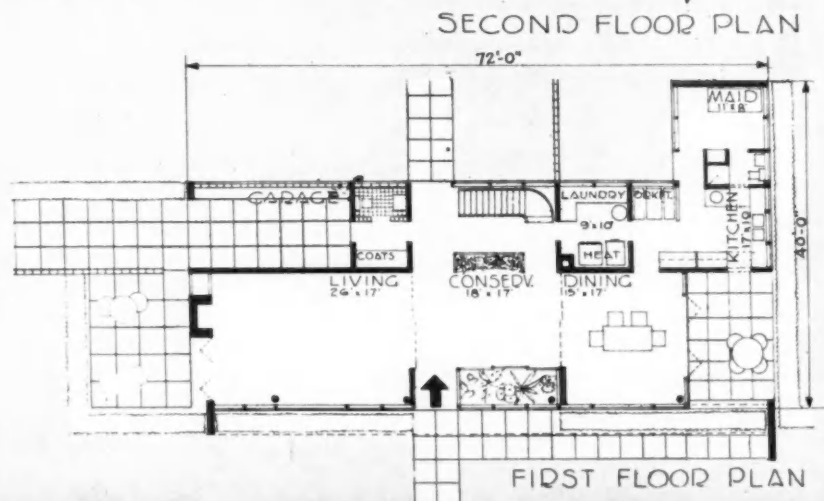
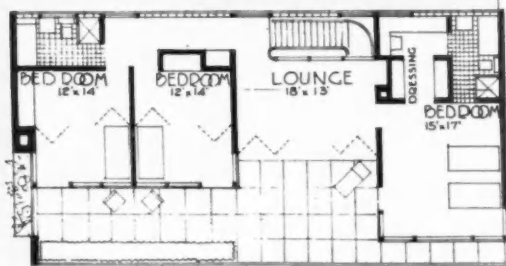
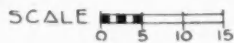
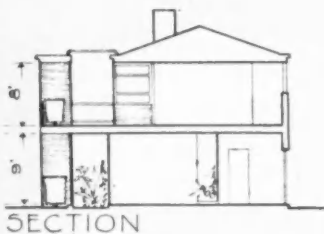
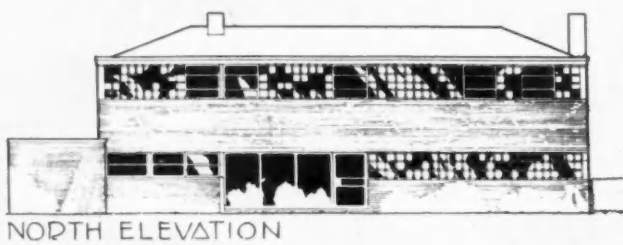


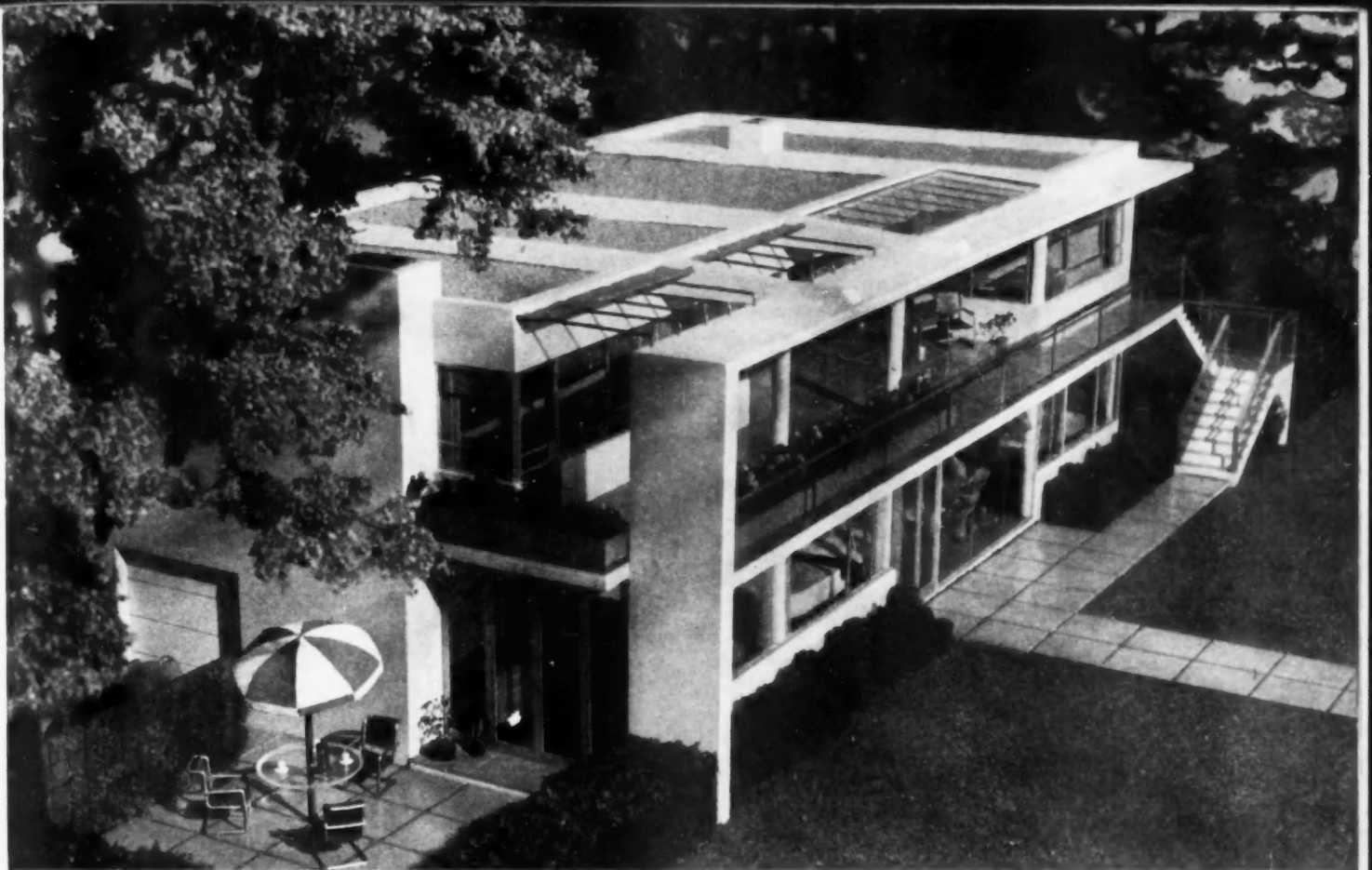
A PLATE-GLASS WALL runs along this second-floor terrace. Concrete overhangs above both first and second floors cut off hottest summer sun but let in winter sun.

"Contribution of Glass to Better Living" Shown in Flat-Roof Structure to "Bring the Outdoors in"

ARCHITECTS LANDEFELD AND HATCH have taken a look into the future and applied the many recent developments in glass to this Town of Tomorrow house sponsored by Pittsburgh Plate Glass Company. It is a 10-room and 3-bath structure of large rooms, many of which can be merged by opening sliding glass doors. The frame work is of steel and concrete, using concrete cavity walls and striking cantilevered concrete overhangs.

TO "BRING THE OUTDOORS INSIDE" the designers have employed large glass windows—about two-thirds of the wall area of the living space is glass. There are extensive terraces and open porches, one of which on the second floor has a low, plate-glass wall which breaks the wind but permits a view of garden below.





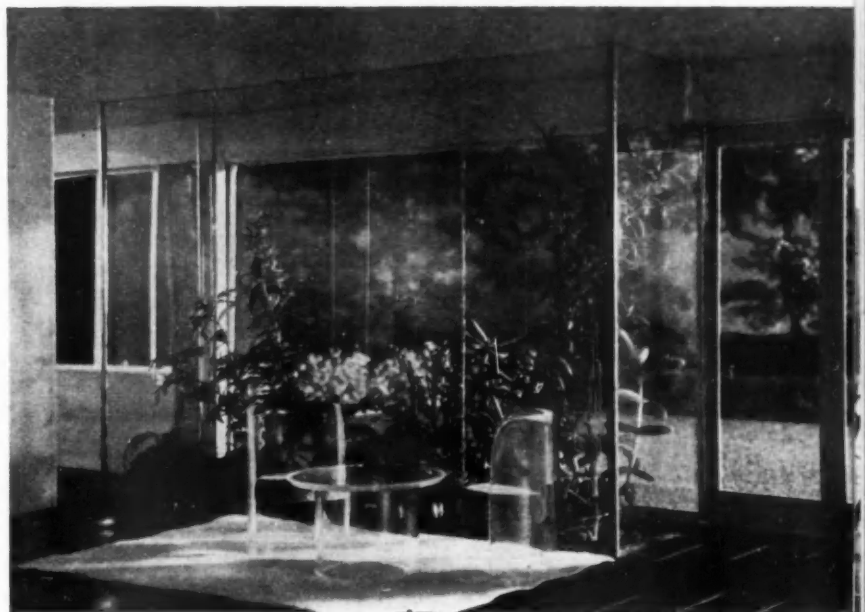
VIEW OF GARDEN SIDE OF HOUSE showing glass walls of first floor, interesting terrace treatment second floor.

Featuring Sliding Glass Doors— Flesh-Tinted Windows—Glass Brick Garden Walls—Glass Stair Risers

OUTSTANDING features of the "Glass House" at the Fair, illustrating some of the new developments in this field, include:

1. Sliding glass panels dividing a bedroom into a fresh air portion, often cold, for sleeping, and a warm area for dressing.
2. Flesh-tint windows in the living room, to give a feeling of warmth in cold weather.
3. A low plate-glass wall along the upstairs terrace, breaking the wind, but preserving the view of the garden below.
4. Garden walls of glass block (translucent but not transparent), decorative in quality and functional in that they give privacy to the living terrace by screening the view from the street.
5. Window sills, baseboards, and kitchen and bathroom walls of Carrara structural glass, a smooth, opaque material selected for its cleanliness, beauty and serviceability.
6. Glass-enclosed planting spaces at the front and rear of the conservatory, acting as decorative screens to shield inside activity and providing a vista through greenery in all seasons.
7. Glass risers on the stairs, providing complete illumination and thus contributing to safety.

Other interesting structural features include the use of the concrete wall as a finished interior surface in several places. The second floor is supported on half a dozen thin concrete columns, affording flexibility in arrangement of the first-floor partition. In addition to



CONSERVATORY looking through shrubbery area enclosed in Herculite glass.

glass products supplied by Pittsburgh Plate Glass Company and Pittsburgh Corning Corporation, other participants include the General Electric Company, heating and kitchen equipment; wiring arrangements by National Adequate Wiring Bureau; tile installation, New York Tile Company; floor finishes, S. C. Johnson & Son; bathroom fixtures, Crane Company; furniture and decoration, Modernage Furniture Company.

The exterior walls, on garden and street, are almost entirely of glass on both floors. The side walls of the first floor are largely of glass.



Photos by Norman Cary

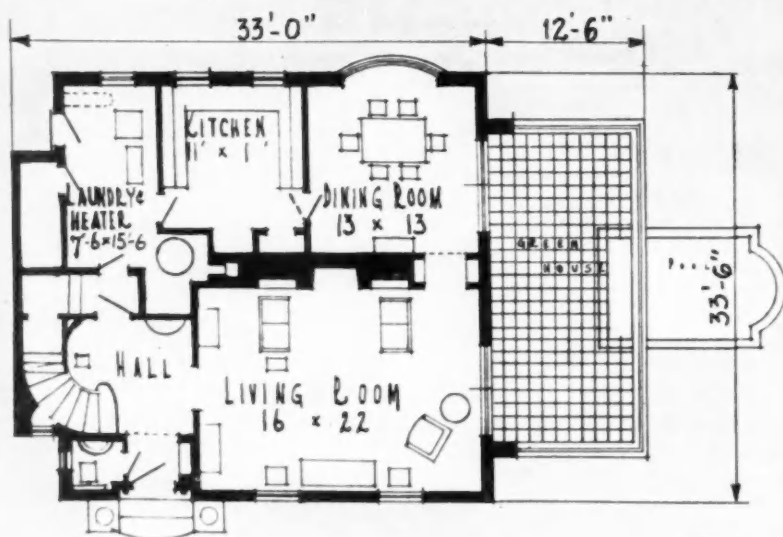
FIRE-SAFE HOUSE—STEEL AND CONCRETE FLOORS

THIS SUBSTANTIAL APPEARING Fire-Safe House at the Fair, sponsored by the Home Insurance Co., is constructed of face brick with terra-cotta backing. It has an asbestos-cement roof and steel and concrete floors. The architect is Perry M. Duncan.

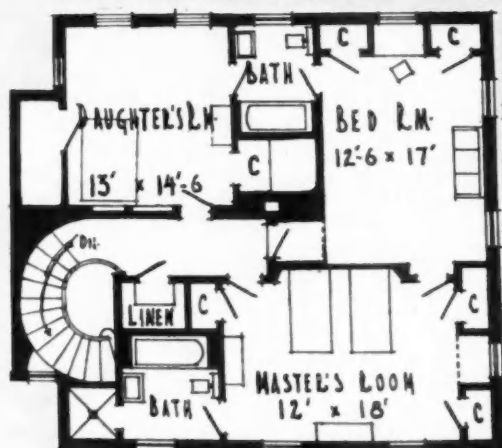
ROOMS ARE LARGE and spacious, with good cross ven-

tilation. Both living room and dining room open out upon a glass enclosed porch or green house, with tiled floor. There is no basement, and laundry and heating equipment are placed in utility room off kitchen. Plans call for a two-car garage in wing at left (not shown in floor plan); as built at the Fair this space is used as office for the sponsors.

74



FIRST FLOOR PLAN



SECOND FLOOR PLAN

FIREPLACE is attractively framed by slightly projecting wall. Glass brick at end of room allow light into the stair hall.



AMERICAN BUILDER
True Cost FIGURES
FOR THIS HOUSE
ON PAGE

77

COLORFUL modern wall-paper gives life to the fire-safe bedroom. Double hung aluminum windows bring in plenty of light and air.



Special Features and Details

GARDEN ROOM—Lord & Burnham Co. glassed-over terrace, drip-proof construction.

INSULATION—Ferro-Therm metal insulation stapled between studs and rafters. Lead and tin alloy makes sheets corrosion proof.

ROOF—Johns-Manville asbestos-cement Salem Colonial shingles reproducing textured surface of old weathered shingles.

WINDOWS—Kawneer Sealair aluminum windows, double-hung and casement.

DOORS—Johns-Manville flush doors throughout the home.

FIRE-SAFE FLOORS—Subfloors built of steel and concrete using Jones & Laughlin Junior beams and reinforcing.

GLASS BLOCK—Owens-Illinois Glass Co., Insulux Glass Block.

LIGHTNING PROTECTION—Certified Dodd system of lightning protection installed by West Dodd Lightning Conductor Corp., Goshen, Ind.

INTERIOR WALLS—Sanitas washable fabric wall covering as manufactured by Standard Coated Fabrics Corp., New York.

AMERICAN BUILDER
True Cost FIGURES
 FOR THIS HOUSE
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SIMPLE Colonial proportions—nicely detailed in the New England Colonial tradition.

THE NEW ENGLAND HOME

TRADITIONAL NEW ENGLAND architecture will continue to be the favorite of the American public, the architect of this home, Cameron Clark, believes. He believes that there will be just as much sentiment concerning Colonial Home Design in the future as there has been in the past. The floor plan features a large living room and dining

room running across the rear of the house with French doors opening upon a garden. There is a downstairs study and bath. The large master bedroom upstairs opens upon an attractive porch at rear. The exterior of the house is carried out in asbestos cement shingles. Other products include Overhead garage door, Ferro-Therm Metal Insulation, Jones & Laughlin steel and concrete first floor, Yale & Towne hardware, Modine concealed copper radiators, Acme deluxe kitchen cabinets, Ilg ventilating fans.

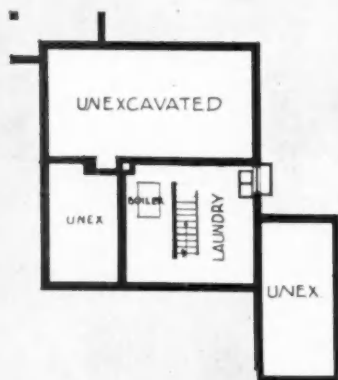
Photo by Norman Cary.



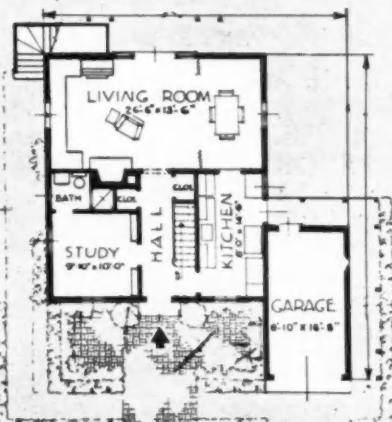
SECTION

SIDE ELEVATION

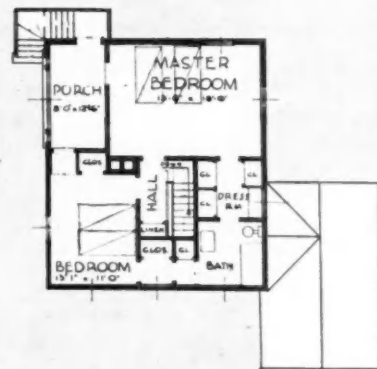
REAR ELEVATION



BASEMENT PLAN



FIRST FLOOR PLAN



SECOND FLOOR PLAN



Figures for American Builder Homes

HOME DESIGNS ON PAGES AS NUMBERED

Units of Construction	June 51	June 52	June 54	June 57	June 59	June 61	June 63
Basement Walls, lin. ft.	0	0	0	0	106	150	146
Trench Walls, lin. ft.	190	183	172	147	41	178	78
Basement Floor, sq. ft.	84	68	0	25	648	1014	893
Garage Floor, sq. ft.	201	180	0	0	200	380	180
Excavation per ft. deep, cu. yds.	0	0	0	0	30	50	43
Outside Walls, squares	28	15.21	12.60	11.8	18.23	37.00	22.50
First Floor, squares	12.46	10.04	12.57	7.8	7.00	11.58	10.61
Second Floor, with Fin. Flg., sqs.	8.70	0	0	0	4.20	11.58	7.92
Second Floor, without Fin. Flg., sqs.	0	0	0	0	0	0	0
Ceiling, sqs.	14.12	11.84	12.57	8.05	9.00	15.58	11.70
Roof Pitch, inches rise per ft. run	Flat	7"	5"	5"	12"	11"	13"
Roof, squares	13.90	14.78	14.52	9.	13.64	18.80	19.20
Hips and Valleys, lin. ft.	0	120	104	104	20	152	86
Cornice, type and lin. ft.	Tile Coping, 216	C & F-173	6"-8	8"-101	C & F-174	0	C & F-234
Cornice, type and lin. ft.	0	0	30"-212	0	0	6"-174	10"-54
Partition, lin. ft.	135	165	104	88	210	260	350
Inside Finish OS Walls, lin. ft.	280	136	192	126	192	300	290
Front and OS French Doors, opgs.	8	1	7	1	1	4	3
Rear and Grade Doors, opgs.	1	2	1	2	1	4	2
Garage Doors, 8 ft. wide.	1	1	0	0	1	2	1
Inside Doors and Cased Opgs., opgs.	10	17	12	8	16	30	26
Windows and Casements, opgs.	40	30	34	15	25	24	28
Gable Sash and Louvers, opgs.	0	0	0	0	0	0	2
Chimney, lin. ft.	22	20	15	13	33	37	36
Main Stairs	1	0	0	0	1	1	1
Porch Floor, sqs.	3.85	1.92	3.00	1.28	14	9.00	1.00
Porch Ceilings, sqs.	.35	.16	0	1.28	0	3.00	.40
Porch Beam, lin. ft.	12	12	0	44	31	70	29
Porch and Balcony Post and Newels, no.	0	4	0	4	4	10	10
Porch Roof, sqs.	0	.20	0	1.40	0	3.20	.45
Porch Cornice, lin. ft.	0	12	0	48	0	0	22
Porch and Deck Rail, lin. ft.	0	8	50	0	0	168	36

HOME DESIGNS ON PAGES AS NUMBERED

Units of Construction	June 65	June 66	June 68	June 70	June 74	June 76
Basement Walls, lin. ft.	191	128	0	127	House Part Only 133	64
Trench Walls, lin. ft.	103	109	200	138	90	140
Basement Floor, sq. ft.	978	838	51	486	1026	256
Garage Floor, sq. ft.	180	210	0	240	0	153
Excavation per ft. deep, cu. yds.	45	40	0	28	45	10
Outside Walls, squares	25.92	36.11	18.3	30.30	29.35	25.2
First Floor, squares	10.66	10.04	8.8	10.68	14.00	8.4
Second Floor, with Fin. Flg., sqs.	12.66	7.56	0	7.80	10.80	7.4
Second Floor, without Fin. Flg., sqs.	0	0	0	0	0	0
Ceiling, sqs.	12.96	12.14	8.8	13.08	14.00	9.93
Roof Pitch, inches rise per ft. run	12"	7"	5"	6"	10"	7"
Roof, squares	17.74	15.	12.	14.64	17.08	11.77
Hips and Valleys, lin. ft.	42	0	56	80	176	18
Cornice, type and lin. ft.	C & F-146	C & F-174	6"-79	Cut-in & F-198	C & F-216	C & F-52
Cornice, type and lin. ft.	8"-60	Parapet 56	3'6"-80	0	0	8"-132
Partition, lin. ft.	403	236	80	262	300	190
Inside Finish OS Walls, lin. ft.	312	242	148	277	291	232
Front and OS French Doors, opgs.	2	4	3	4	3	4
Rear and Grade Doors, opgs.	1	1	1	2	1	2
Garage Doors, 8 ft. wide.	1	1	0	1	0	1
Inside Doors and Cased Opgs., opgs.	35	22	12	23	28	21
Windows and Casements, opgs.	29	30	26	24	36	17
Gable Sash and Louvers, opgs.	0	0	0	0	0	2
Chimney, lin. ft.	33	34	Metal 20	36	40	38
Main Stairs	1	1	0	1	1	1
Porch Floor, sqs.	3.82	1.62	3.04	3.05	28	1.52
Porch Ceilings, sqs.	3.15	1.62	1.44	.28	0	1.30
Porch Beam, lin. ft.	56	30	39	8	0	33
Porch and Balcony Post and Newels, no.	9	5	3 Panels	0	0	4
Porch Roof, sqs.	2.52	1.62	140	0	0	0
Porch Cornice, lin. ft.	55	36	27	8	0	0
Porch & Deck Rail, lin. ft.	0	0	70	16	0	35

Necessary Home Equipment, Fixtures, Accessories, Extras

Since the above surveyed items cover only the actual superstructure of the house, you should figure and add the following items as specified or wanted (and dont forget Overhead and Profit):

Areaways, Cellar Sash, Coal Chute, Basement Partitions & Doors, Attic Flooring, Attic Stairs, Blinds, Gutters & Downspouts, Fireplaces,

Built-in Cabinets, Rail & Newels for Stairs and Stair Well, Beamed Ceiling, Weatherstrips, Tile Work, Plumbing, Heating & Air Conditioning, Lighting, Terraces, Patio Walls or Fences, Sidewalks including Porch Steps, Driveways, Unattached Garages. Also add for painting and decorating if not included in Unit Costs.

Farmhouse and Farm Buildings at Fair Designed for Electric Service

ON the banks of Flushing Creek at the New York World's Fair, builders interested in farm construction will see a practical working farm, with a farm house, dairy barn and other buildings completely equipped. Electricity does the work on this farm, efficiently and economically. More than one hundred practical applications of electricity are shown—all under working conditions.

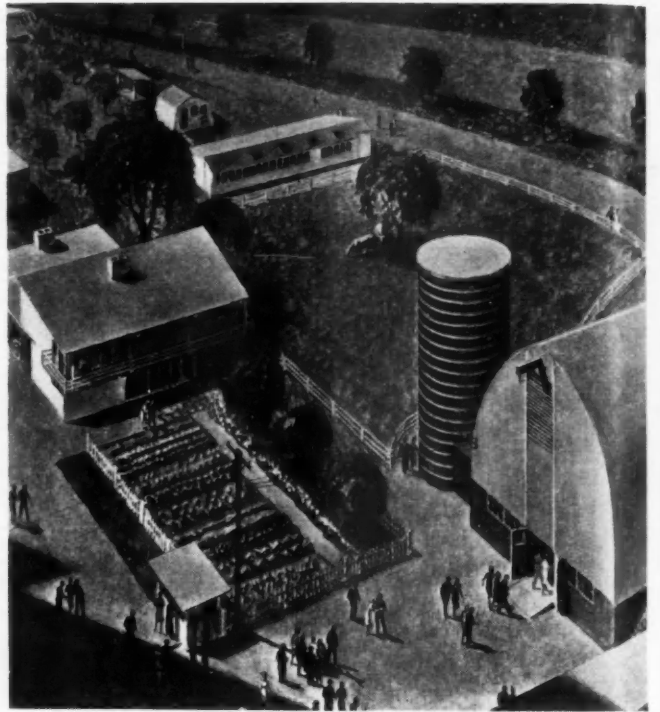
Many of the uses of electricity are well known to the nearly 1,500,000 farms receiving electric service. At the Electrified Farm all of the common uses, and many of the new, tested and proved practices which are within the means of the average farmer, are assembled in a complete working unit.

The house is an attractive two-story frame structure, with a tile terrace. On one side is a flower and vegetable garden; apple trees and elms make a picturesque setting for the house, and maples in the pasture lot provide convenient shade for the cattle. At one end of the plot, grouped for convenience and efficiency, are the silo and barn, with a bull exerciser at one corner of the barn, the milking parlor, dairy room, workshop and horse shed; at the other end of the plot, the poultry house, brooder house, greenhouse, hotbeds, community packing house and the orchard.

New Electrical Equipment and Other New Features Shown in Farm House

The farm house is the hub around which practically all activity on the farm centers—particularly the farm kitchen. And what a kitchen this is! Complete in every detail with the most modern kitchen conveniences and still within the purse range of the average family.

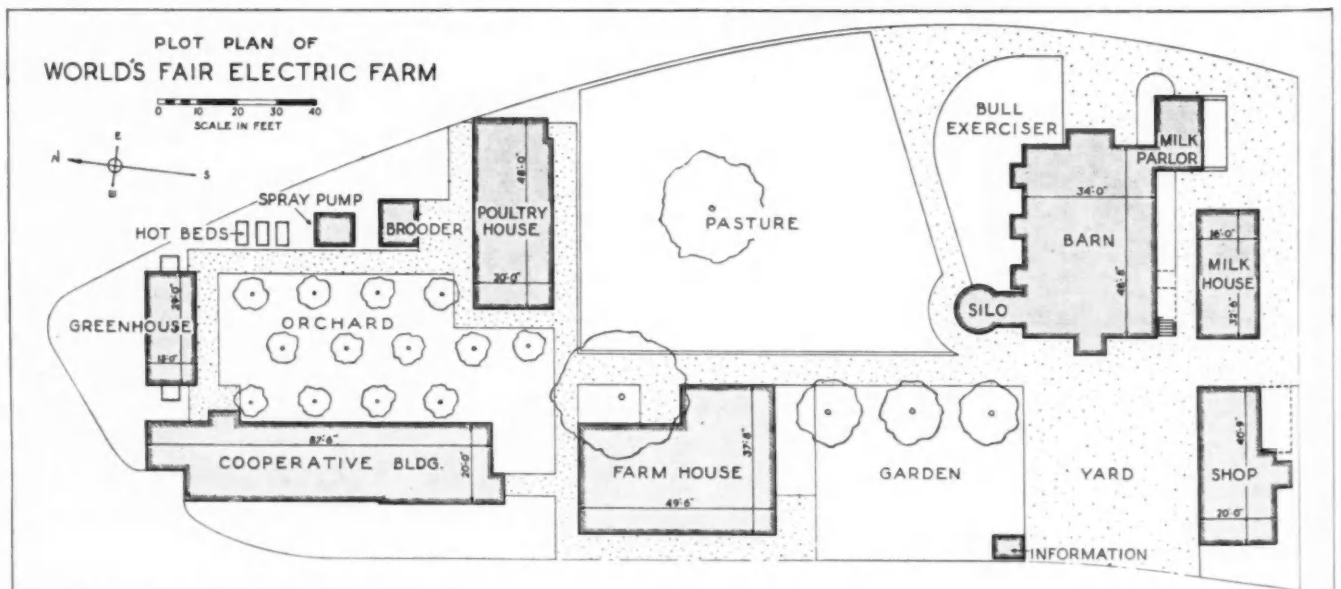
In this kitchen scientific planning is evident in the location of each piece of equipment—designed to conserve time, labor and footsteps. The electric range, the sink and electric dishwasher, are on the same working level, making a complete working surface around the kitchen, which every housewife knows is important for efficient work. Underneath are cabinets and an electrically operated disposal unit for garbage. The kitchen is also equipped, of

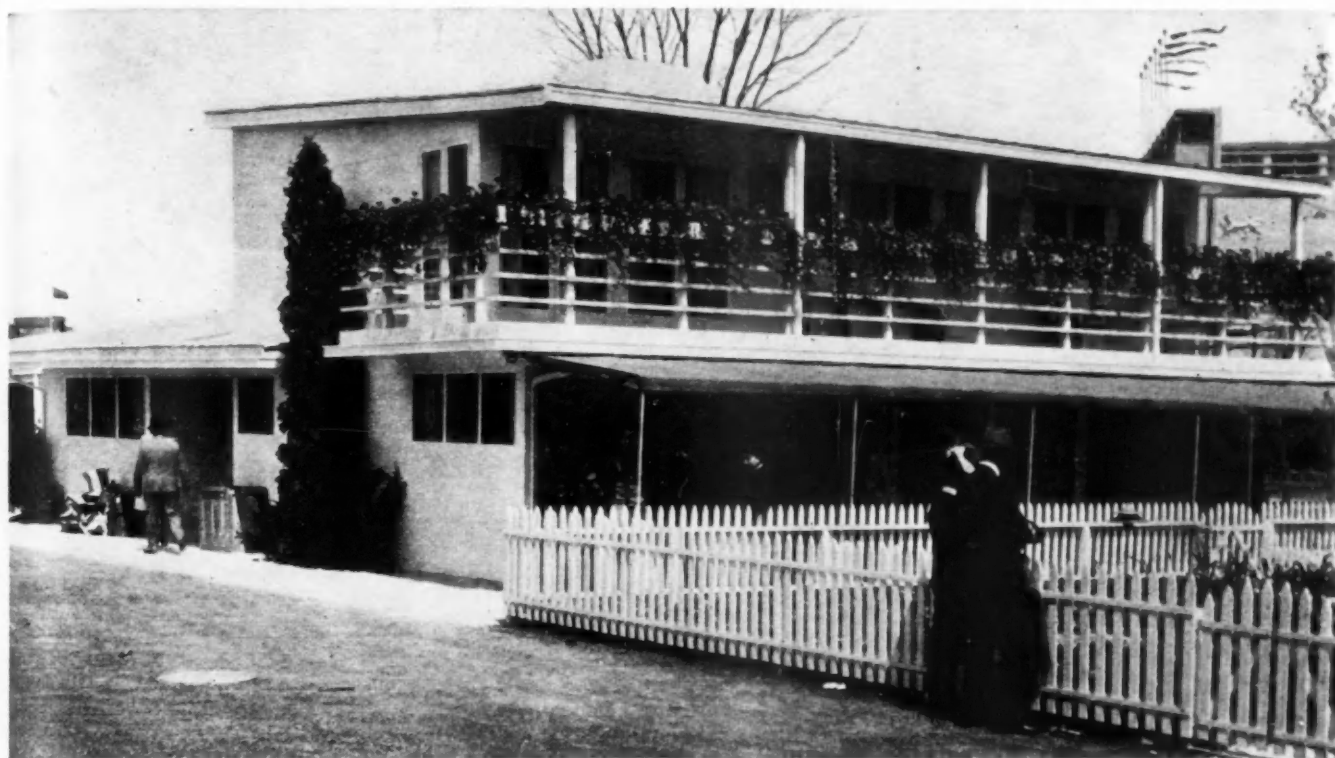


BIRD'S-EYE view of the one-acre Electrified Farm of the Electric Utility Industry at The New York World's Fair.

course, with all of the smaller appliances, such as mixing bowls, grinders, coffee maker, toaster, and many others; an exhaust fan helps keep the kitchen cool and free of odors—all adding to kitchen comfort and efficiency.

The outstanding feature of the kitchen is the two-compartment refrigerator—one compartment for quick freezing—something new. This refrigerator is divided into two compartments of approximately 12 cu. ft. each. On one side the temperature is held at zero for freezing and holding meats, poultry, fruits and vegetables; on the other side the regular refrigerator temperature is below 50°.





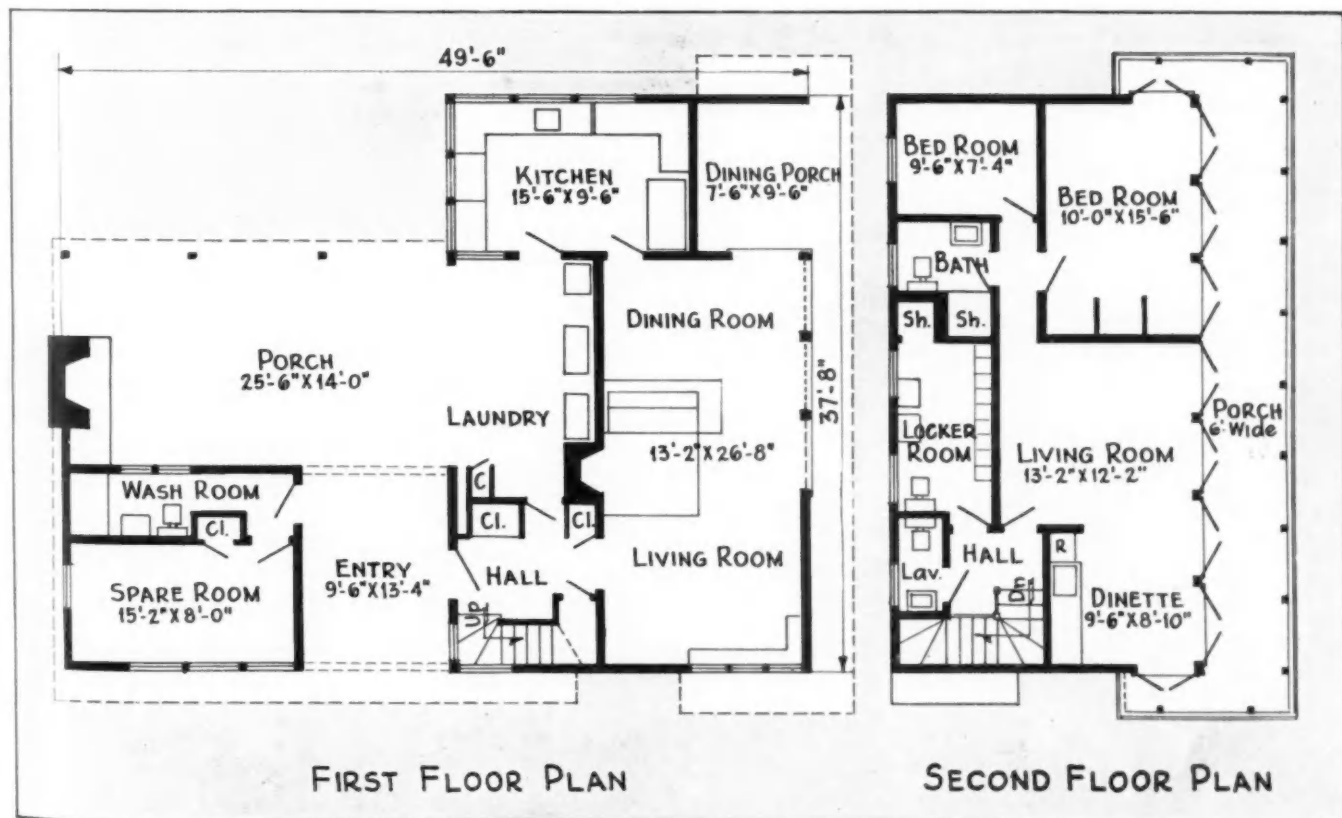
FARM RESIDENCE of the Electrified Farm is a Flat-top Modern.

With this refrigerator fruits and vegetables, meats and poultry, can be frozen when they are available and kept for months, making it possible for the farmer and his family to have fresh fruits and vegetables from their own garden at any time of the year, with the flavor just as good as when they were stored.

The outside kitchen door opens on to a tile terrace which makes an ideal outdoor dining porch for summer. The laundry is on the ground level, doing away with

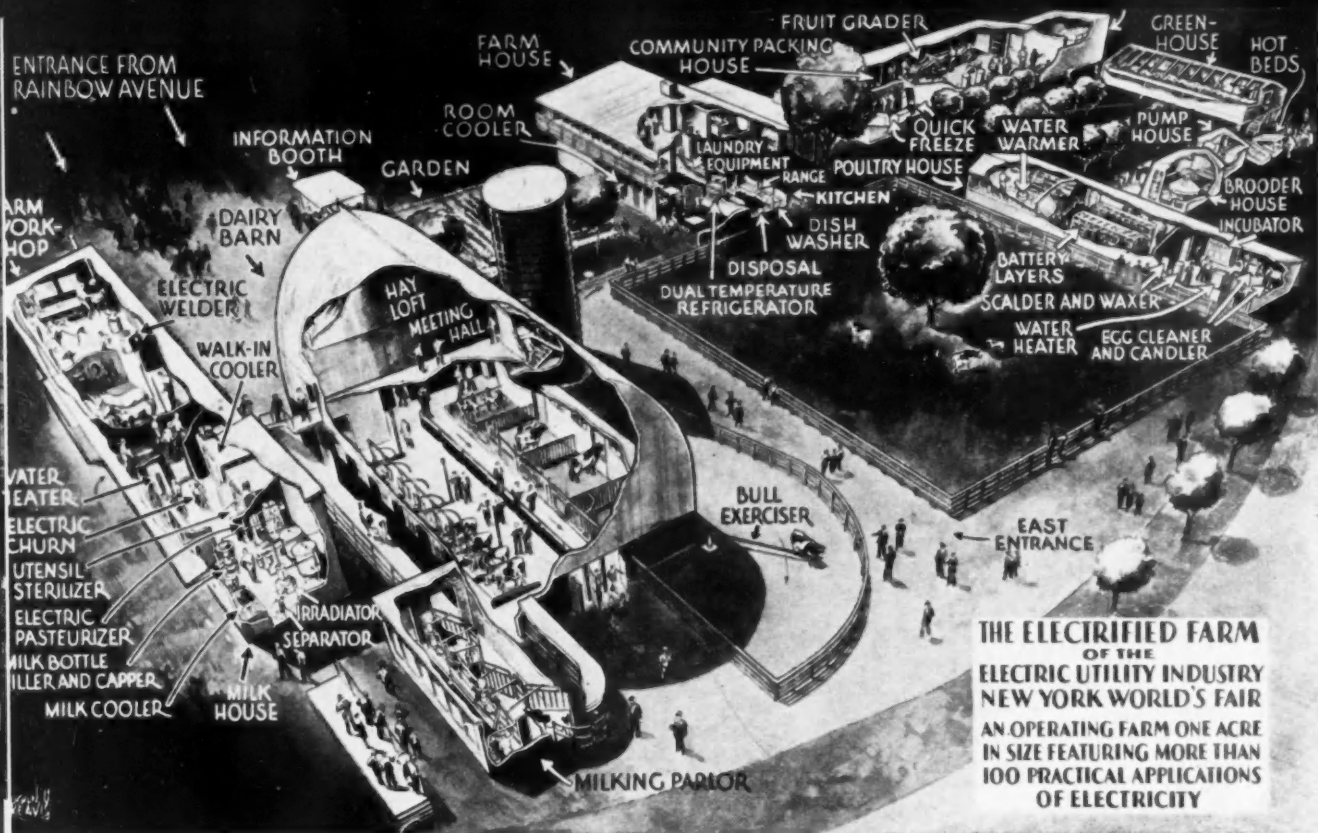
the many trips up and down stairs usual on washday in so many homes. The distinctive feature of the laundry is a new washing machine which automatically soaks, washes, rinses and rough dries the clothes, with little or no attention from the operator. That certainly has come a million miles from the old wash-tub! In a handy location next to the washer are the electric ironer and the electric sewing machine.

A separate room opening on to the terrace serves as a



FIRST FLOOR PLAN

SECOND FLOOR PLAN



combination office and spare room. This is a room the farmer can call his own, in which he may keep records and books. The built-in daybed can be used for the overnight guest. It also has a wash room and shower for the farmer or hired help to wash and change clothes.

Opposite the office, one enters through a hallway to the living room and dining room. This is actually one room, separated partly by a built-in daybed and bookcase. The room is designed for maximum comfort, with the radio conveniently located. The lighting arrangement is the outstanding feature of this room.

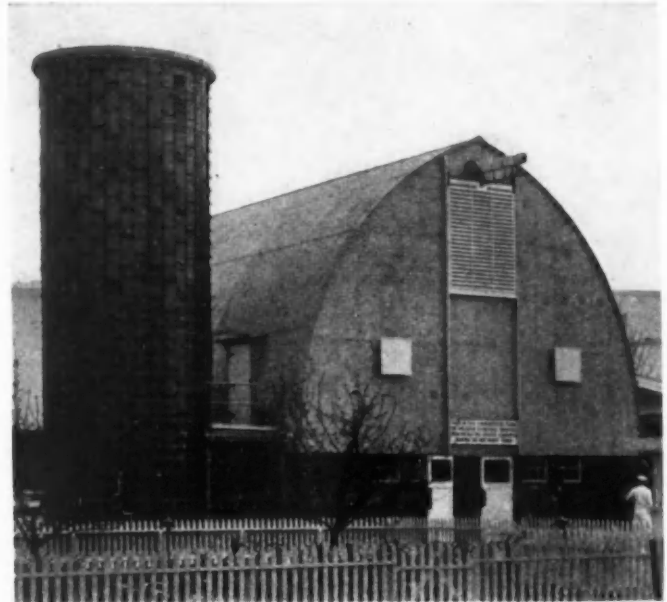
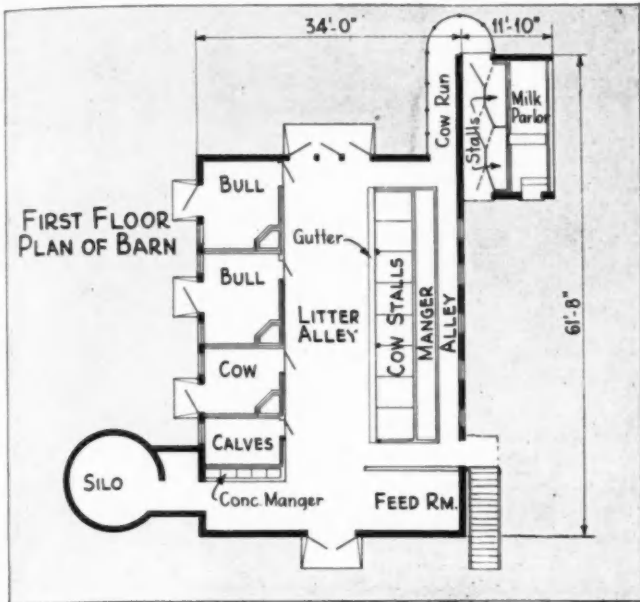
On this side of the house is a vegetable and flower garden, well advanced, since all the plants will be started in electric hotbeds and in the green house.

The barn is complete and up-to-date in every respect—proper lighting and ventilation, drinking cups, the largest type stalls, grinding and mixing of feed and pumping of water. A feature of the stalls are the rubber covered cow beds. These are rubber mats about $\frac{1}{4}$ " thick laid directly on the concrete floor. The mats insulate the floors, so that they are more healthy for the cows, economize on the use of bedding, and minimize the danger of injury to the animals.

On one side of the barn are eight tie-stalls for milking cows; on the other, four box stalls, with a pen of calves, a cow and calf, and two bulls. These cattle are to be supplied from famous herds by the Breeder Associations. Guernseys the first six weeks; Jerseys the second,

MODEL STABLE in Show Barn. At the back of the picture you see "Foremost Taurus," prize bull at the World's Fair Electrified Farm, looking over the herd of nine milking cows and two heifers—all pure-bred Guernseys from the J. C. Penney Farm. These animals live in air-conditioned luxury at The World's Fair.





BIG GOTHIC ROOF Barn for the Electrified Farm at The New York World's Fair.

Holsteins the third; Ayrshires in the last period of the Fair.

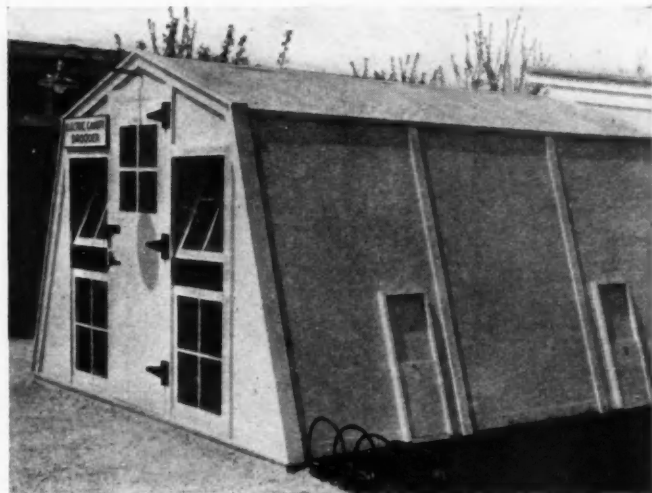
The top of the barn—which would ordinarily be a hay loft—is a room accommodating about one hundred people, and will be used as a meeting room for farm organizations and others at the Fair.

In the billion dollar dairy business, which places 30,000,000 bottles of milk each morning on the nation's doorsteps, electricity is indispensable as can be seen by following the various steps in the production and processing of milk. On the Electrified Farm the complete operation is shown.

After being washed and cleaned in the stable the cows go down a passageway to the milking parlor of white tile and concrete, spotlessly clean. This is a small room on the side of the barn, just large enough for two cows standing tandem in their stalls, with the operator working from a pit on a lower level. The front of the parlor is of glass, so that the complete milking operation is visible. In this milking parlor a modern magnetic combine milker takes the "arm-ache" out of the hardest job on a dairy farm. The milk is drawn into a glass container where it is weighed without being exposed to the atmosphere. After it is weighed, it is drawn off through sanitary pipes into the

WORLD'S FAIR Electrified Farm Kitchen Planned to Save 10,000 Steps a Year. Planned for assembly-line efficiency, this kitchen is a home-maker's dream. From the dual-temperature refrigerator, which has a zero-temperature section for storing frozen foods, right around to the range, work-spaces and labor-saving appliances are arranged in logical order.





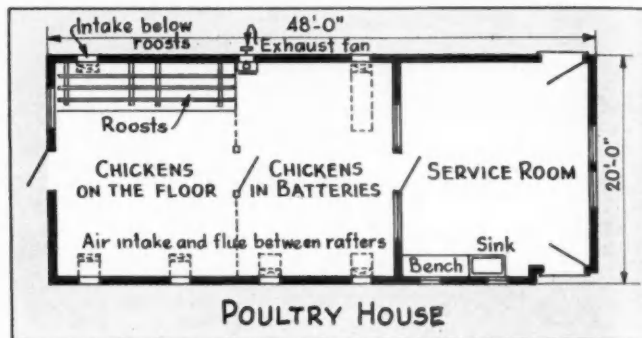
THIS ELECTRIC Canopy Brooder is part of the Model Poultry Yard.

dairy room. From this container it goes to a clarifier, which takes out any possible foreign matter; through the electric pasteurizer, through the irradiator to add Vitamin D, and then it is automatically bottled and put in the cooler.

Utensils are washed in hot water and sterilized in the electric sterilizing cabinet, so there is no chance of contamination. The first time the air comes in contact with the milk is when the consumer takes the cap off the bottle in his own home.

The workshop on the Electrified Farm is completely equipped, with electric forge, anvil, electric drill, electric saw and a portable electric arc welding outfit. With this equipment in his workshop, a broken casting or piece of machinery doesn't mean a trip to town—sometimes when the farmer can least spare the time.

The income from eggs and chickens is well over a billion dollars a year and it is still a growing industry. In the poultry house on the Electrified Farm a complete poultry unit is shown. In this poultry house, some of the hens



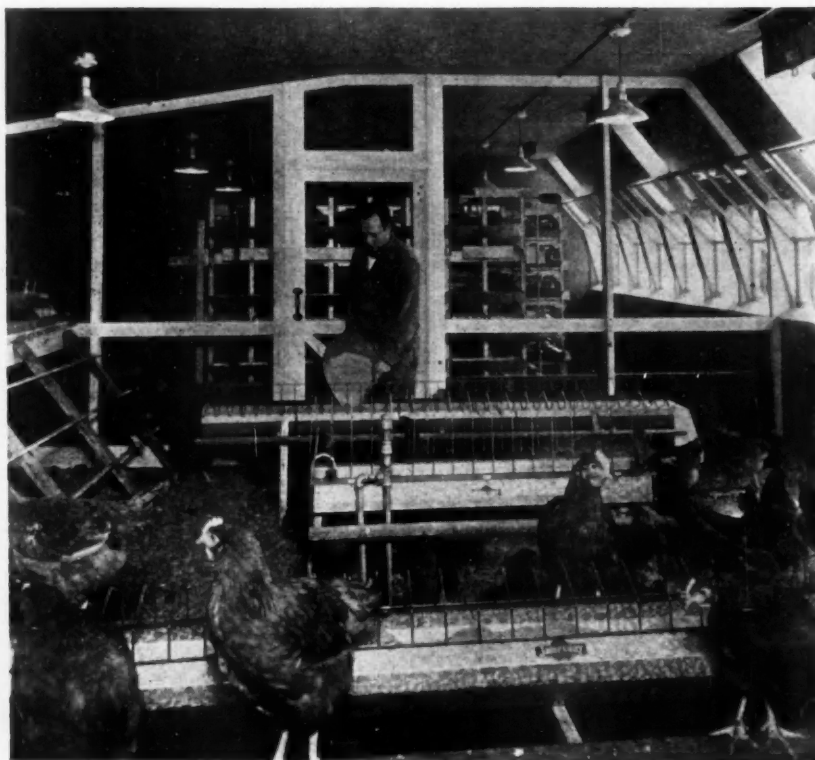
MODERN POULTRY House of the Electrified Farm.

will be kept in laying batteries and some in the conventional type laying house.

The incubator in the service room of the poultry house will have chicks hatching twice a week so there will always be new chicks to put in the battery brooder, which is also in the service room. Some of these chicks will be kept in an electric hover brooder in a separate brooder house just outside of the main poultry house.

The Electrified Farm at the New York World's Fair shows some of the things electricity can do to make farm life more comfortable for the farmer and his family, and how it can put money in the pocket of the farmer who avails himself of up-to-date, economical, time and labor-saving machinery, equipment and appliances.

Don't miss seeing the Electrified Farm of the Electric Utility Industry at the New York World's Fair!



INSIDE THE MODEL Poultry House. Larry Eller, the attendant, says he is going to kill chickens this summer at the World's Fair Electrified Farm; but not for general display. Only farmers seriously interested in the science of killing chickens, and then scalding and waxing them electrically for market, can watch. Larry expects to get peak egg production from his flock of Rhode Island Reds this summer, because the electric henhouse lighting insures a long working day for the hens.

Model Home Workshop By DONALD E. BUCKWELL

Excites Tool Lovers

BOOTH the skilled artisan and the amateur carpenter will get a thrill when they see the Model Home Workshop at the New York World's Fair. Located on the first floor of Model House No. 15 in The Town of Tomorrow, it is fully equipped with work benches, hand tools and power tools. At a glance the skilled tool-user will recognize it as an ideal setup for the man who enjoys woodworking as a hobby.

Of particular interest in this exhibit of tools are many different kinds of edge tools. There are various sizes of the conventional iron smoothing planes and the small block planes that are so handy for planing the ends of boards, moulding, trim and siding. But besides these there are several special kinds of planes designed for specific uses.

Take the Fibre Board Cutter. It is a specialty tool used to cut and ornament the new fibre insulating materials so often used as ceiling and side wall board in new and remodeled rooms. The tool is handled just like a plane, but it has a razor blade type of cutter that cuts through or grooves the insulating board. Attachments are furnished to make circular grooves and for shiplap cuts. It is a tool that many carpenters find useful and also has been found extremely helpful to the display man who builds displays and exhibits of fibre board.

The "Fifty-Five" Plane is probably the most versatile plane made. Carpenters use it to produce mouldings of many different shapes and home craftsmen find it just

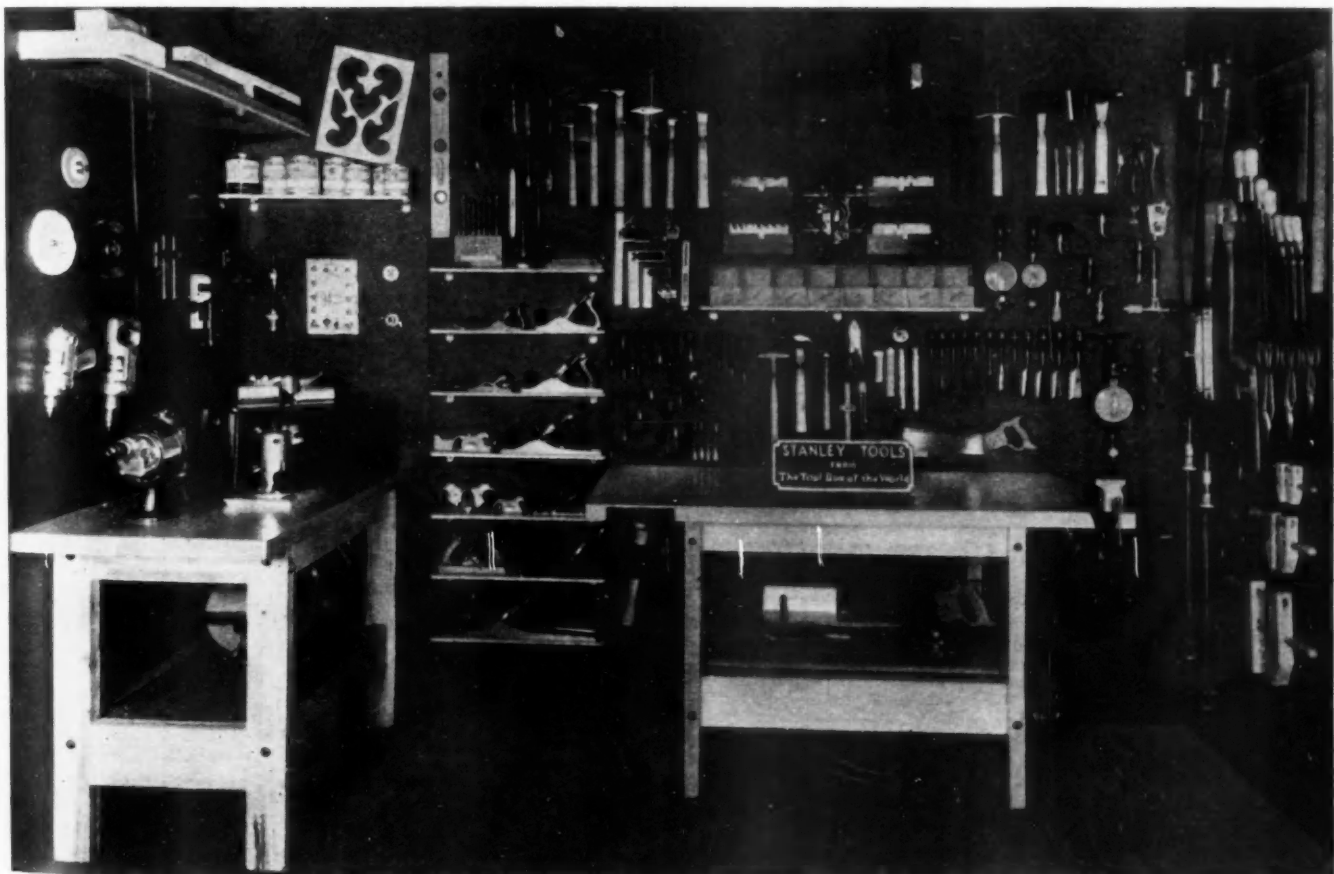
right for making the decorative effects that give their homemade furniture projects a professional appearance. It is a beading, center beading plane, a plow, dado, rabbet, match, sash, slitting and moulding plane all in one. The secret of its versatility is that it is designed to take any one of fifty-five standard cutters furnished with the plane and also any one of the forty-one special cutters for different types of moulding cuts. Besides these cutters that are stock items, cutters of practically any form can be used in the "Fifty-Five" plane which the owner can make from blanks or order from the manufacturer.

There is a plane designed for cutting tongues and grooves for matched boards. The plane has two cutters, one to cut the tongue and one to cut the groove. Both cutters are held in the plane at the same time. When one cut has been made, the operator merely reverses the plane and makes the other cut. A handle at each end facilitates handling for both cuts.

The Model Maker's Plane in the exhibit is one of the smallest planes made. It has a bottom curved in both directions and is only $3\frac{1}{2}$ inches long so that it can be held easily in the palm of the hand when in use. It's a particularly useful tool for the hobbyist who delights in making models and for the skilled violin or pattern maker whose work often entails planing of curved surfaces.

Besides the planes there is a set of twelve wood chisels with blades from $\frac{1}{8}$ inch wide up to 2 inches. The woodworker who has occasion to cut chamfers and bevels, round corners and to clean out corners of tenon, dado and rabbet cuts will appreciate the wide range of chisel sizes. A mallet with rubber composition head hangs on the wall

(Continued on page 114)



DISPLAY of woodworking tools in Model Home Shop at New York World's Fair illustrates progress in skilled craftsmanship.

Typical House Costs \$1,600 Less than in 1925

Contractors' Overhead Up; Profits Down, Cost Analysis by Wenzlick Shows

THE accompanying charts and tables reveal the results of a thorough analysis of residential construction costs, going back to 1913, by Roy Wenzlick, president of Real Estate Analysts, Inc., Saint Louis, Mo. Mr. Wenzlick has taken a typical 6-room house and has obtained the actual on-the-job costs from contractors and material dealers. In his usual thorough fashion he has not accepted surface indications but has taken actual

costs: thus the labor items are not "official" union scales but are *wages actually paid*.

Despite the fact that contractors' overhead costs, exclusive of profit, have risen sharply since 1925, the total cost of this typical house has decreased from \$8,026 in 1925 to \$6,420 this year. The contractor's \$1,000 profit in 1925 has been whittled down to \$541 in 1939. The sharp rise in contractors' overhead costs, represented by workmen's compensation insurance, public liability, payroll taxes, and similar costs, as indicated in Column 13 of the accompanying table, is not generally appreciated by the public clamoring for lower priced homes. The

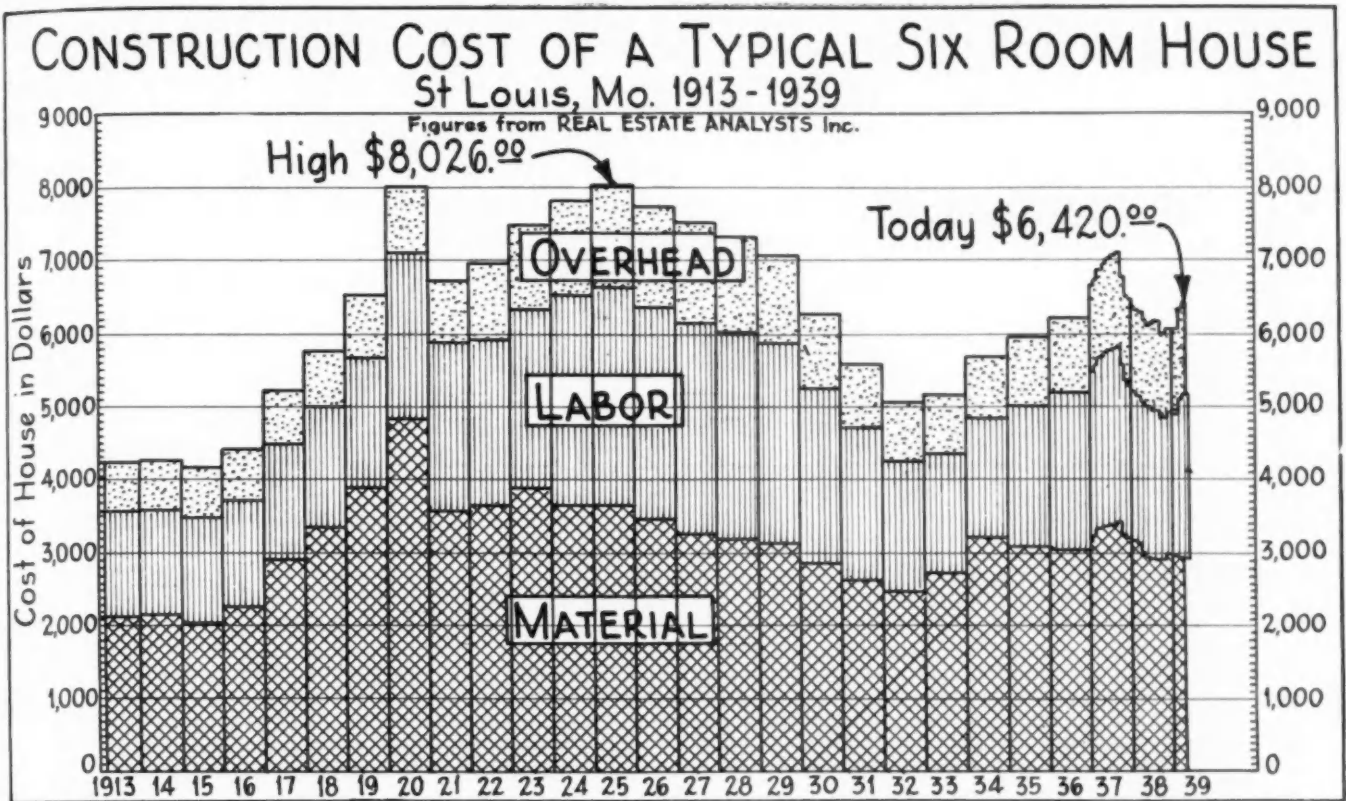
COST ANALYSIS of typical 6-room St. Louis house, 1913 to 1939, is shown below. Each column is numbered and the items included in that division are described in the paragraphs below, which are numbered to correspond with the columns. Land cost is not included.

MATERIAL	LABOR	OVERHEAD
1. Cost of face brick, salmon brick, backing tile, flue lining and building stone.	6. Cost of setting all stone, laying brick and pouring concrete.	12. Cost of all city permits, city inspections, utility connection costs, and architect's fee for drawing plans.
2. Cost of all materials going into mortar, concrete, cement and plaster.	7. Cost of labor on lathing and plastering.	13. Cost of interest; fire, tornado, riot and civil commotion, (1927-) public liability and workmen's compensation insurance.
3. Cost of all lumber, flooring, millwork, roofing and paint.	8. Cost of carpentry, roofing, flooring, painting and builder's general supervision.	14. Estimated profit made by the builder.
4. Cost of all materials for plumbing, heating, electrical work, sheet metal work, iron work, hardware, tiling and accessories.	9. Cost of installing plumbing material and fixtures, wiring, heating plant and sheet metal work.	15. TOTAL OVERHEAD COST.
5. TOTAL MATERIAL COST.	10. Cost of excavation, grading and landscaping.	16. TOTAL COST OF CONSTRUCTION.
	11. TOTAL LABOR COST.	

YR.	MATERIAL					LABOR					OVERHEAD TOTAL					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1913	\$433	\$226	\$860	\$613	\$2132	\$306	\$250	\$575	\$183	\$111	\$1425	\$181	\$53	\$450	\$684	\$4241
1914	524	227	833	552	2136	313	250	577	183	111	1434	181	53	450	684	4254
1915	411	228	819	578	2036	310	250	578	195	111	1444	177	52	450	680	4160
1916	455	217	867	716	2255	322	250	580	202	111	1465	185	55	450	690	4410
1917	618	268	1081	927	2894	352	250	671	211	111	1595	212	65	450	727	5216
1918	689	332	1348	967	3336	358	260	719	212	123	1672	232	72	450	754	5762
1919	787	388	1739	959	3873	403	270	775	231	123	1802	256	83	500	839	6514
1920	1053	451	2084	1239	4827	443	270	1152	248	160	2273	307	99	500	906	8006
1921	791	407	1322	1044	3564	453	290	1152	262	160	2317	264	83	500	847	6728
1922	846	357	1477	954	3634	471	300	1060	277	160	2268	267	84	700	1051	6953
1923	867	370	1552	1086	3875	490	300	1168	316	179	2453	275	89	800	1164	7492
1924	783	375	1412	1065	3635	625	350	1385	346	197	2903	287	92	900	1279	7817
1925	725	358	1462	1091	3636	675	350	1400	385	197	3007	290	93	1000	1383	8026
1926	717	333	1354	1055	3459	646	300	1398	354	197	2895	282	89	1000	1371	7725
1927	708	337	1185	1032	3262	641	300	1398	347	197	2883	275	183	900	1358	7503
1928	692	331	1231	929	3183	621	275	1395	337	197	2825	267	179	850	1296	7304
1929	665	331	1269	851	3116	582	240	1395	335	204	2756	267	174	750	1191	7063
1930	660	294	1081	809	2844	572	183	1132	334	185	2406	250	158	600	1008	6258
1931	638	256	956	764	2614	501	158	970	332	140	2101	214	144	500	858	5573
1932	572	281	918	711	2482	411	135	832	273	123	1774	218	129	450	797	5053
1933	641	299	1160	621	2721	388	142	721	287	118	1656	218	143	410	771	5148
1934	675	313	1485	735	3208	388	142	721	287	118	1656	218	162	450	830	5694
1935	667	310	1330	768	3075	501	199	825	287	131	1943	218	215	510	943	5961
1936	667	310	1255	810	3042	521	210	980	287	159	2157	218	265	540	1023	6222
1937	695	300	1478	827	3300	584	211	1118	257	165	2335	249	362	585	1196	6831
1938																
Ja	695	295	1362	821	3173	501	186	994	235	131	2047	230	357	545	1132	6352
F	695	295	1340	821	3151	501	186	994	235	131	2047	230	356	545	1131	6329
Mr	693	295	1310	813	3111	501	186	994	235	131	2047	230	355	545	1130	6288
Ap	693	295	1298	738	3024	501	186	994	235	131	2047	230	352	530	1112	6183
My	642	295	1282	740	2959	501	186	994	235	131	2047	230	350	525	1105	6111
Je	597	314	1260	791	2962	501	186	994	235	131	2047	230	350	525	1105	6114
Jy	571	314	1260	791	2936	501	186	994	235	131	2047	230	431	520	1181	6164
Ag	571	314	1260	783	2928	501	186	994	235	131	2047	230	431	520	1181	6156
S	571	314	1260	783	2928	501	175	874	235	131	1916	230	416	510	1156	6000
O	571	314	1260	783	2928	501	175	874	235	131	1916	230	416	510	1156	6000
N	582	314	1320	783	2999	501	175	874	235	131	1916	230	418	515	1163	6078
D	582	314	1320	783	2999	501	175	874	235	131	1916	230	418	515	1163	6078
1939																
Ja	600	314	1277	783	2974	501	183	874	235	131	1924	230	419	515	1164	6062
F	600	314	1277	783	2974	501	183	874	235	131	1924	230	419	515	1164	6062
Mr	631	306	1249	783	2969	543	221	1007	235	131	2137	230	447	535	1212	6318
Ap	631	306	1249	752	2938	602	275	1007	235	131	2250	230	461	541	1232	6420

LABOR, material and overhead costs, analyzed according to various subcontracts, are shown for a typical house for every year since 1913. Contractors' overhead costs have increased very sharply.

Cost of House in Dollars



increase in this one item alone (Column 13) has been from \$93 in 1925 to \$461 in April this year.

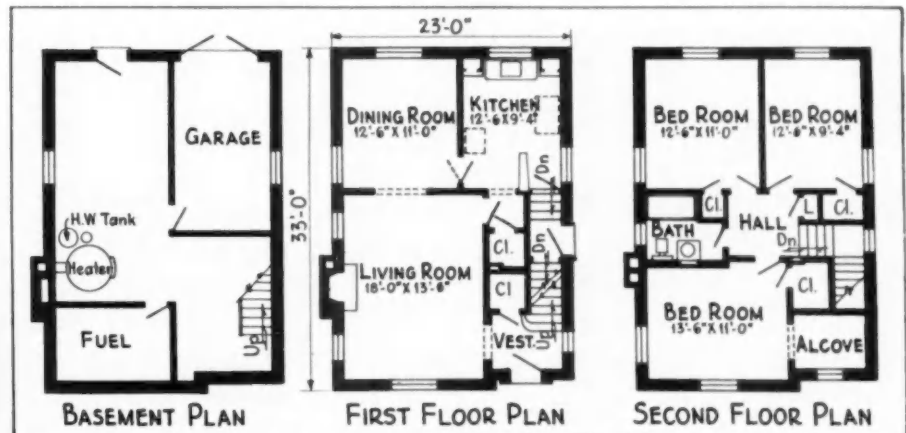
The house used by Mr. Wenzlick in this study is a 6-room brick and tile house with warm air heating plant, full basement, composition roof, tile bath. The cost figures, of course, do not include land nor do they include the financing costs, both of which have shown sharp reductions. Thus, the overall monthly cost to the consumer of a completed house, including interest charges, is less than the figures of actual construction cost show.

In commenting on these figures Mr. Wenzlick says, "It is believed that construction costs in Saint Louis are fairly typical of construction costs in medium-sized metropolitan areas throughout the United States, not necessarily in their level but in their reaction. Like most of these other areas, a large part of the residential building in the single-family residence class has generally been done on a non-union basis. This has necessitated the examination of the actual records of contractors to find out actual wages rather than some theoretical scale.

"The rapid rises which we are now getting in construction costs are due almost entirely to increases in wage

rates due to union activity. This has come in Saint Louis largely in the last few months. Building material costs are being held down to a large extent by government intimidation. The building material industry has been threatened by monopoly investigations in Washington, and is treading cautiously at the present time. In addition, the executive heads of many of the larger material manufacturers are well convinced of a relationship between construction volume, construction costs, and values of comparable standing properties. They realize that while price increases are doubtless justified by their costs they cannot be increased at the present time.

"If labor costs continue to increase, however, a situation will arise similar to the one in 1937, at which time construction costs, together with commodity prices, advanced so rapidly that business came to a standstill. There is considerable strength in the residential field today, however, due largely to the FHA financing, and if costs do not advance too rapidly, construction volume will be only slightly retarded. Even war scares have not been able to keep residential volume from exceeding by a wide margin the levels of a year ago."



TYPICAL 6-ROOM ST. LOUIS HOUSE used by Wenzlick in analyzing construction costs since 1913.

How to Estimate Accurately

Estimating the Floor Unit of House Framing Is Discussed in This Article of a Series

By J. DOUGLAS WILSON

Head, Building Trades Dept., Wiggins Trade School, Los Angeles, Calif.

THE second unit in the framing division of a house, from the estimator's point of view, is the floor. Underpinning was discussed in the March issue. The other units are walls, ceilings, roofs and stairs.

The several parts of the floor unit are joists, header joists, solid and herringbone bridging and sub-floor. These terms can be applied to both first or second floors, in fact can be used to describe any floor of a framed residence.

FLOOR JOISTS: Floor joists are supporting framing members placed in a horizontal direction on which the sub-floor is laid. They are carried by the girders and outside walls for the first floor, and the bearing partitions and outside walls for the second floor.

The thickness of joist stock is never less than 2" and rarely more, unless some special construction is designed. The width of the lumber varies according to the span, the wider span requiring wider joists. The number of pieces of lumber required to make the floor joists will vary with the spacing. Also in good construction each cross partition should have a floor joist under it.

Rule: The length of the first floor joists is scaled on the foundation plan. For the second floor joists the first floor plan is scaled. All joists must be long enough to bear on either a girder or bearing partition. Read the specifications for the amount of lap required if joists are not continuous. An average residence requires several different lengths of lumber for the joists. The direction of the first floor joists is at right angles to the girders. The blueprint should be carefully studied for the direction of the second floor joists. Joists should span the short way of a room if possible.

Rule: To find the number of joists, multiply the length of the wall that carries the floor joists by the spacing of the joists. (See the table given in a previous article for spacing constants.) This will give the number of spaces, a fractional space being counted as a full one. Then add one. Then add one extra joist for every partition that runs parallel to the joists. This will give the number of joists required. This process should be repeated for each outside bearing wall of the building. To illustrate: A wall is 37' long; the joists are spaced 16" on centers (o.c.). How many pieces will be required? Solution: $37 \times \frac{3}{4}$ equals $27\frac{3}{4}$ spaces (counted as 28 spaces). 28 plus 1 equals 29 pieces. Extra joists under cross partitions must then be added.

HEADER JOISTS: A header joist is a continuous piece of lumber nailed on the outside end of the joists or sometimes it is cut in between each joist. Headers must also be cut in between joists at each girder, over which a partition is built, and over each bearing partition. Its purpose is to close the space between the ends of the joists and also keep them from twisting.

The size of the lumber is always the same as the joists.

Rule, 1st floor: The linear feet of all outside bearing walls plus the linear feet of all girders over which a partition is built equals the linear feet of header stock.

2nd floor: The linear feet of all outside bearing walls plus the linear feet of all bearing partitions equals the linear feet of header stock.

BRIDGING: In order to strengthen a set of floor joists, framing lumber called bridging is cut and nailed between the joists, placing each row at equal distances across the span. Sometimes only one row of bridging is required, in which case the span is divided in two parts. When two rows of bridging are specified, the span must be divided into three equal parts. Bridging is usually required for second floor joists and for first floor joists that span a basement.

There are two kinds of bridging: solid and herringbone. Solid bridging is really another set of headers the same size as the joist stock. Herringbone bridging is made from 2" x 3" or 2" x 4" and is cut in such a way that each pair of bridging forms a small truss, which prevents the joists from sagging.

Rule: For solid bridging, the length of the room over which the joists span, is the linear feet required. Repeat for all rooms listed in the specifications. The specifications should be consulted to find the number of rows required. The building ordinance will give the maximum span allowed without using bridging.

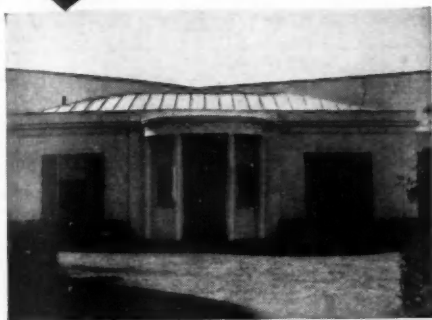
To find the number of linear feet of herringbone bridging it is necessary to find the length of one piece. The diagonal of an angle formed by the width of the joist (rise) and the spacing of the joist (run) equals the length of one piece. Next divide the room or building length by the spacing of the joists. This will give the number of spaces for which bridging stock is necessary. Multiply the number of spaces by the combined length of one pair of bridging stock; result is the linear feet of lumber to order for one continuous row of bridging. Multiply this answer by the number of rows of bridging required.

A short cut method can be followed if the table below is used. Determine the width of the joists. Read specifications for joist spacing. Then multiply the linear feet of distance to be bridged by the constant. Result equals linear feet of lumber to order to make one row.

HERRINGBONE BRIDGING TABLE		
Size of joists	Spacing	
	12"	16"
2x 6	2.00	2.00
2x 8	2.00	2.00
2x10	2.25	2.25
2x12	2.50	2.50
2x14	2.75	2.50
2x16	3.00	2.50

Note: Bridging can be laid off by using the carpenter's steel square. See Fig. 1, page 88.

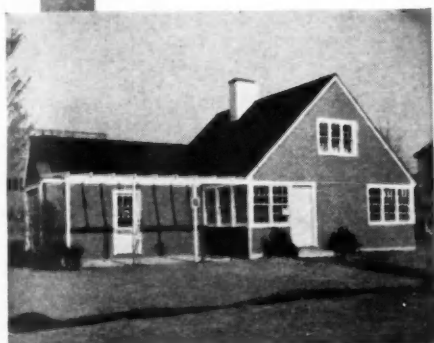
GAS KEEPS HOUSE IN THE HOMES OF TOMORROW!



"HOMWOOD"—THE ALL-GAS
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At The New York World's Fair
Architect: Dwight James Baum



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Architect: Henry S. Churchill



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TOWN OF TOMORROW
Architects:
Evans, Moore & Woodbridge



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Architects:
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The bridging out problem is simply one of rise and run. As shown in drawing, Fig. 1, below, rise of the bridging is not the actual width of the joist stock but is at least 2" less than that width.

The run is equal to the width of the spacing between the joists.

For a floor using a 2" x 10" joist, the run would be 14 in. while the rise would be 7½ in.

As the exact difference between distances B and C of the drawing is not known until one piece of the bridging is cut so that the length of the plumb cut can be measured, the simplest way is to assume that the width of the joist is the rise of the bridging. Then, using this rise and the spacing as the run, lay off the pattern, keeping the rise and run figures on the opposite side of the bridging stock. This will automatically take care of the difference between B and C.

Shift the square to its second position and mark another plumb line and the layout of the pattern will be complete.

SUB-FLOOR: Sub-floor material is rough lumber SIS nailed on top of the floor joists to form a solid base for the hardwood flooring. 1" x 6" material is often used; occasionally tongue and groove (T & G) stock is specified.

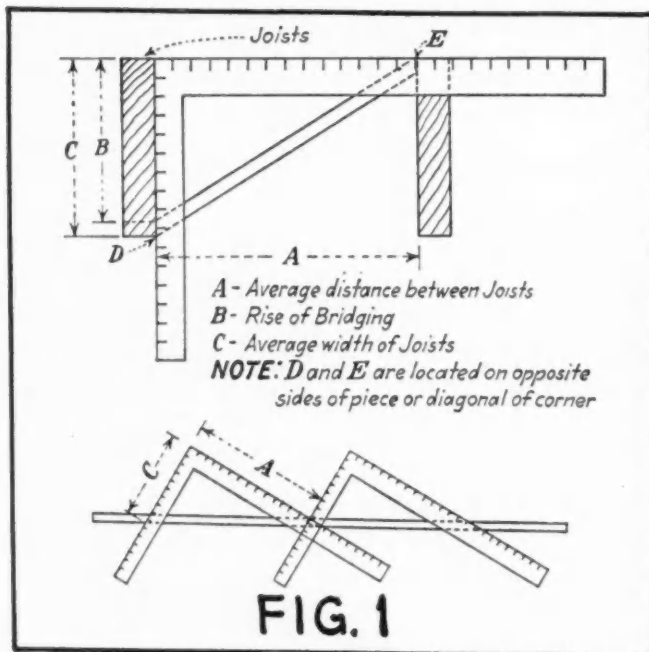
Sub-floor is laid either at right angles to the floor joists or at a 45 degree angle. While the diagonal floor is stronger, the main purpose of laying the floor at a 45 degree angle is to permit the hardwood floor to be laid in either direction. This makes it possible to lay a hardwood floor the long way of any room.

The board footage of sub-floor lumber will vary according to its width and the way it is laid. Specifications must be studied carefully to see which rooms require sub-floor. Often the kitchen and service porch have a finished pine floor which is later covered with linoleum.

Several definite steps must be followed when estimating sub-floor. Figure the net area of the surface to be covered. For a rectangular building covered with sub-floor, the width of the building times its length equals area.

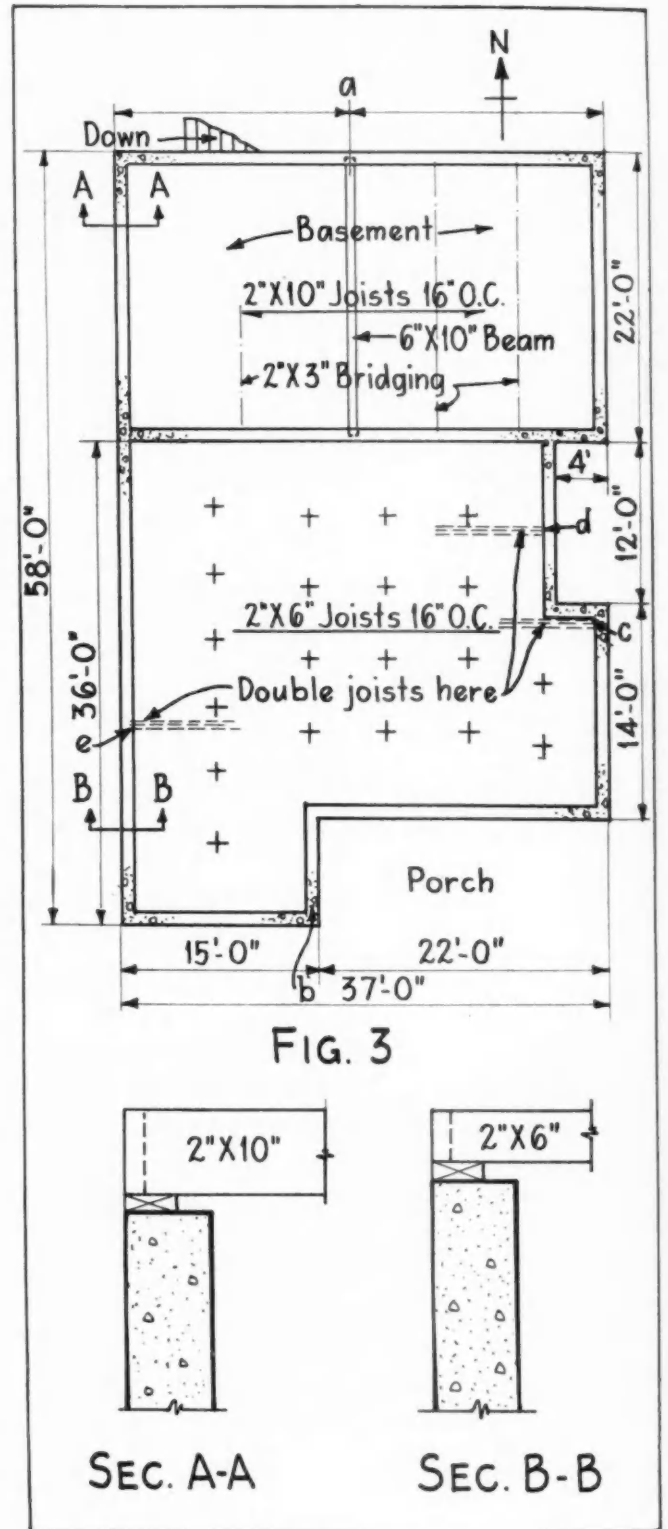
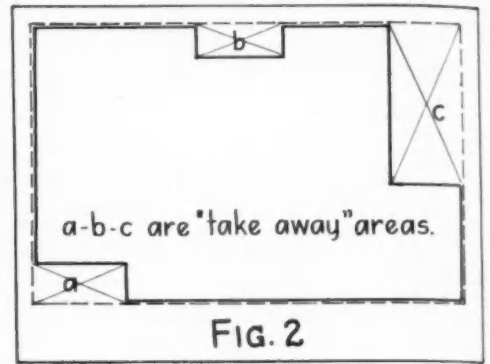
When a building is not entirely covered or if there are angles in the floor layout, the area to be covered can be quickly estimated if a "take-away" method is used.

(Continued to page 110)



IN FIG. 1, above, steel square is used in laying out bridging.

FIG. 2, Right: Areas "a, b and c" subtracted from rectangular overall house area give floor area of cut-up plan. **FIG. 3.** Below: Basement plan for practical problem solved at end of article.



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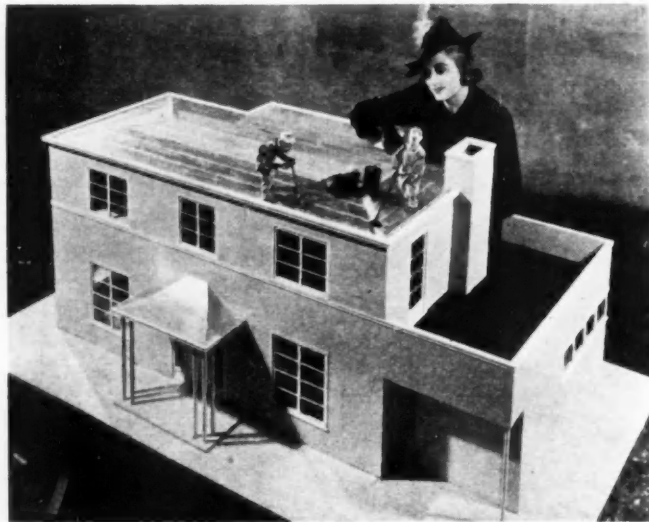
Pabco Exhibit at the Golden Gate Exposition

BY E. F. SEAGRAVE

Manager Building Materials Department,
The Paraffine Companies, Inc.

LONG before we decided how to do it, we determined to use our Pabco exhibit at the Golden Gate Exposition to bring home three points to our visitors. One was that the modern home is the logical development of generations of trial and error building starting with the first cave-dwelling. The second point was that building today is simple and inexpensive—that any young couple can own a home—regardless of the size of their bank account. The third was that the modern home is built with as well as for protection.

So we divided our exhibit into three parts—a mural done entirely in Pabco linoleum showing eight historical steps in



INSPECTS MINIATURE HOME CONSTRUCTION—Miss Sandra Grey watches Lilliputian workmen build the Miniature Model Home in the exhibit of The Paraffine Companies, Inc., at the San Francisco Exposition. It dramatically demonstrates how PABCO building materials can be used to build an inexpensive modernized home. Miss Grey inspects the application of the built-up Pabcoweld roof and gives an idea of the size of the model home which was built to scale in every particular, from fixtures and furniture to the tip-top of the roof.

the development of housing; a motion picture in color which tells the story of a young couple building their own home—how they managed their financial arrangements to suit their income and how they profited from the advice of their building materials dealer and contractor; and our miniature model home, furnished and decorated to scale down to the last tiny detail.

Pabco House—3½ by 5 feet “large”—is a seven-room dwelling with garage and sun-deck, designed to fit the budget of any moderate-income city family. Basically, it is a simple rectangular structure, modern without being modernistic. There is no freakishness, no startling innovation in the planning of Pabco House. The emphasis of its design has been placed on comfort, convenience, and durability.

From its tiny floors to its roof, Pabco House is thoroughly protected against every sort of deterioration and discomfort. Step by step, we have demonstrated how Pabco protective materials can be used to make the home safe and durable. The timber foundations of the home, for instance, are protected against vermin, termites, and dry rot with Pabco Termite Preventive, the liquid protective coating. The masonry is protected against moisture absorption with Liquid Hydroseal.

We have used Pabco Plaster Lath to guard against plaster cracks and to insulate the walls. The outer walls are covered with Bildrite sheathing to save on labor costs and to give extra strength to its construction.

Pabco House is protected against the transfer of heat and cold, wind and rain with Red Liner building paper, Pabco Rock Wool, and the new Coolite back prime. Insulite Acoustilite gives protection against exterior sounds and noises.

The roof is protected against buckling and peeling with the cold process Pabcoweld roof with a Coolite finish. Coolite, which is as beautiful as it is practical, also insulates against heat and cold. In extreme hot weather it reduces the temperature in the house ten to twenty degrees.

We have used Multi-Service paints and Cin-Dek enamels both inside and outside the home to protect surfaces against weathering and stains. This is an important consideration for the woman who intends to do her own housework since these paints can be washed easily and quickly with a damp cloth.

Inside the house beauty, sanitation and ease of maintenance are promoted by the use of linoleum on all floors. Linoleum protects the investment by its long wearing qualities. Year after year, it keeps its brightness with the minimum of time and effort spent on keeping that attractiveness.

For the same reasons, attractive blocked Mastipave is used as floor covering for the spacious sun deck that extends the full width of the house on the second floor.

Whenever possible, the same sort of lumber and building materials which would be used on a normal-size building have been used on the Pabco model. When the small size of the miniature made this impossible, these materials have been represented as nearly like the original as possible.

Thus far, the Pabco booth has been one of the busiest spots on Treasure Island. The miniature is attractive enough to draw large crowds of visitors and the step by step demonstration of its construction is dramatic proof of the development of American building in the direction of sound construction and the skillful use of building materials.



PABCO'S MODERN MODEL HOME—The miniature model home in the exhibit of The Paraffine Companies, Inc., at the San Francisco Fair dramatizes the use of the company's building materials in a home that is modern without being modernistic. The house was planned for convenience, for comfort, and livability. The simple rectangular shape banishes the possibility of complications in the roofing or floor plan, which easily can be added to as the family requires more space.

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The size of truss steel studs...
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Nails and staples...
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For building brick or stone...
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2.75, 3.0, 3.4 lbs.	2" x 4" x 1/2" (19 ga. min. per bundle)
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5.4 lbs.	

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	100 lb. Kegs	50 lb. Kegs	100 lb. Kegs
Concrete Stud Nails	100 lb. Kegs	50 lb. Kegs	100 lb. Kegs
General Staples	100 lb. Kegs	50 lb. Kegs	100 lb. Kegs
Low Economy Staples	100 lb. Kegs	50 lb. Kegs	100 lb. Kegs

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RED TOP CASINGS

EXPANDED METAL LATH

RESILIENT SYSTEM
Elimination of lath...
HOLLOW PARTITIONS
The size of truss steel studs...
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Nails and staples...
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RED TOP CASINGS

RESILIENT SYSTEM
Elimination of lath...
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LATHING SUNDRIES

NAILS AND STAPLES

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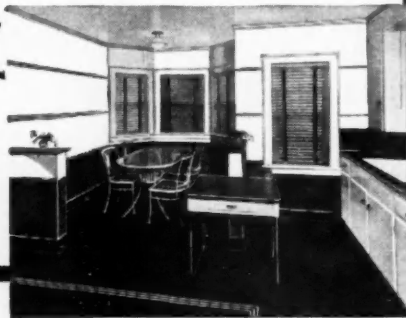
USG Steel Roof Decks are composed of metal plates applied directly to steel joists or bar joists and covered with USG standard attachment clips. Over the deck, insulation board and roofing paper are applied. USG Steel Roof Decks have many advantages over other types of roof decks. Great strength, rapid erection, low cost and light weight are the outstanding features.

Group No.	Lbs. per Sq. Ft.	Allowable Span
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24	2.80	12'-0"
26	3.20	14'-0"

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Marlite FOR LIVING ROOMS

The modern tempo demands living rooms that are luxurious. Build yours with *Marlite* genuine wood-veneer panels!

Beautiful, modern interiors—on display in the "Town of Tomorrow" at the New York World's Fair—are certain to influence the treatment of interiors in residential building right in your own community. Obtain these effects by using *Marlite* in the houses you build today! *Marlite* comes in large prefinished panels that carpenters economically cut to size. With over 100 colors and patterns buyers have widest possible choice. *Marlite* always stays new—needs but a damp cloth to keep it spotlessly bright.

Write for FREE BOOKLET of beautiful home interiors created with *Marlite*—the wall material "that's as modern as Tomorrow"!



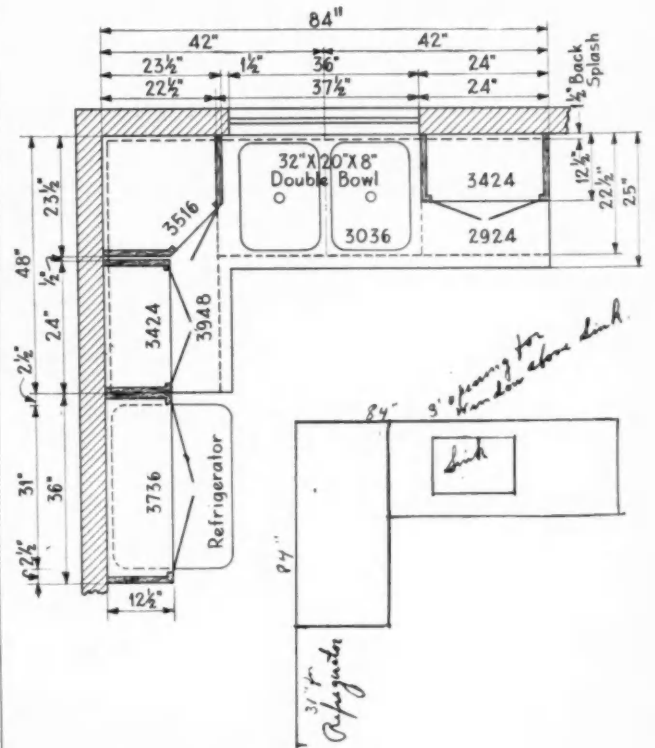
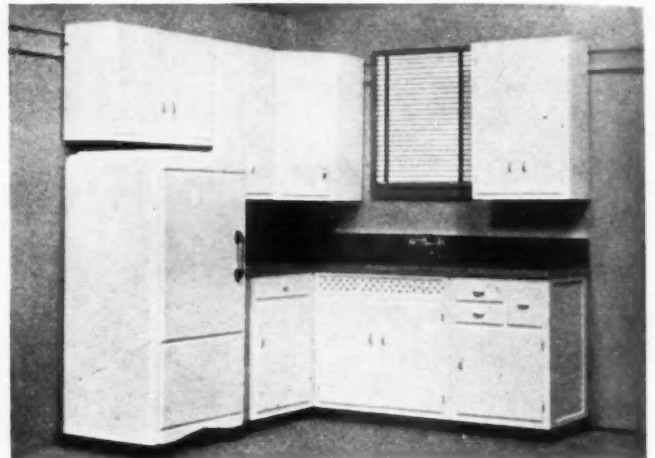
MARSH WALL PRODUCTS, INC.
63 MARSH PLACE DOVER, OHIO

SEE MARLITE EXHIBIT AT NEW YORK WORLD'S FAIR, BUILDING MATERIALS BUILDING

Marlite
FOR CREATING BEAUTIFUL INTERIORS
WALL-SIZE PANELS IN LUSTROUS COLORS AND PATTERNS

New Kitchen Is Visualized

AN UNUSUAL kitchen planning service for builders has been worked out by The I-XL Furniture Co., Inc., Goshen, Ind., which not only plans the kitchen, either new or remodeled, using a variety of standard kitchen units, but also shows the customer in advance a photograph of exactly what this kitchen will look like when completed. The illustrations below show how this service operates: The rough sketch at the bottom was sent in, showing a corner space 84 by 84 inches with one window, in which were to be accommodated refrigerator, sink and all possible cabinets, both base cabinets and wall cabinets, to give adequate kitchen storage space. From this rough sketch the expert prepared the carefully scaled drawing as illustrated, and then actually set up the kitchen units as called for on this drawing, and photographed them. The result is that this builder's customer can see exactly what this kitchen will look like, and the uncertainty is taken out of the job.



24" wide cabinet above Refrigerator.
36" High cabinets above sink & base tops.
36" Corner cabinet above base in corner.
Linoleum top and backsplash for top base and sink top.

ROUGH sketch above, with notations, sent in by builder; I-XL kitchen planner prepared finished drawing, as shown, then set up and photographed the actual units called for. The builder, with such help, made a quick and profitable sale.



THIS KIND OF EVIDENCE HELPS SELL YOUR HOUSES

THE BRAND ON WOLMANIZED LUMBER* IS PROOF THAT YOU HAVE BUILT FOR THE FUTURE



"Wolmanized Lumber was used for the sills, joists and subfloors in this house. That means lasting protection against damage by decay and termites. You'll be spared the expense, in the years to come, of making replacements at these danger points."

"Lower maintenance" is language that every prospect understands. You can explain that the pressure-impregnated Wolman Salts* preservative reacts with the wood extractives to form insoluble compounds that cannot leach out. This long-lived protection means low-cost upkeep.

And speaking of costs, this use of Wolmanized Lumber adds less than 2% to the total cost of a house. A mighty small premium for such valuable insurance against decay and termites. A most helpful addition to your sales story.

We'll gladly give you the complete story on Wolmanized Lumber and a sample of pamphlets which you can use to further the sale of Wolmanized-protected homes. Write to AMERICAN LUMBER & TREATING COMPANY, 1406 Old Colony Bldg., Chicago, Ill.

*Registered Trade-Mark

WOLMANIZED LUMBER

USED FROM HERE



TO HERE
TO PROTECT THE
WHOLE STRUCTURE

Visit the New York World's Fair and you'll acquire an asset of memories that no one can rob you of, come what may!

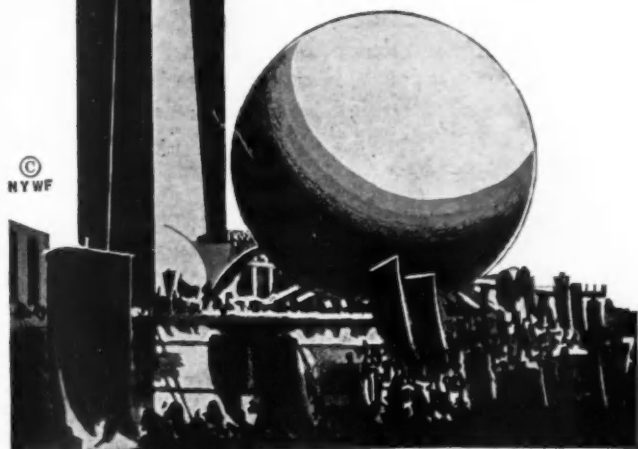
The Original OHIO WHITE LIME FINISH

When a fine job of plastering was sought for the vast interior of the Perisphere, Ohio White Lime Finish was selected. It *must* be good!

The Ohio Hydrate & Supply Company
WOODVILLE, OHIO

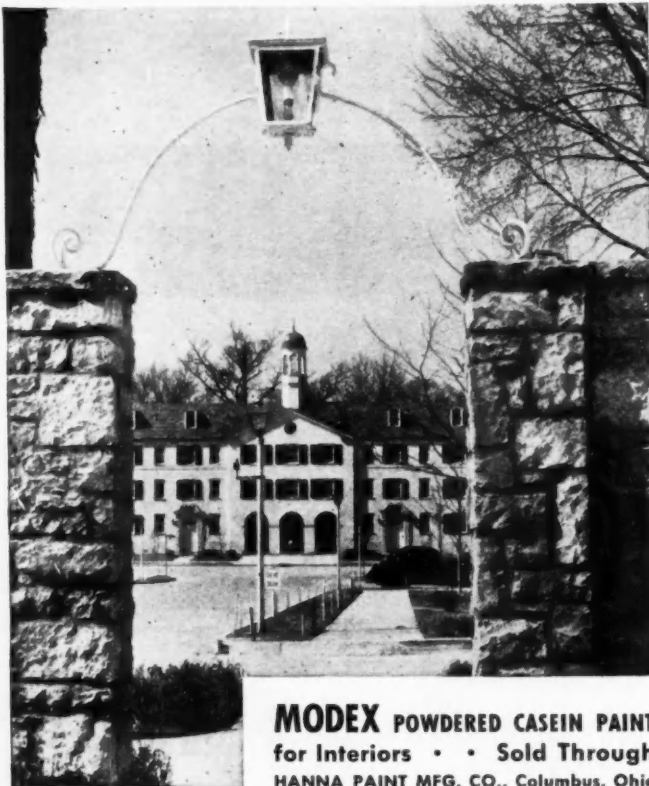
The Perisphere, in the Fair's Theme Center, is an imposing architectural feature made impressive by its size and simplicity Architects—Harrison & Foulhoux, New York; Plastering Contractors—Jacobson & Co., Inc., New York; General Contractors—Hegeman-Harris Co., Inc., New York.

© NY WF



OHIO PRODUCTS SOLD EVERYWHERE IN FAMOUS ZIG ZAG BAGS
Ohio White Finish—Hawk Spread White Finish—Ohio Rite-wall Fibered Lime Plaster—Ohio Sanlime Finish—Mastite Masonry Mortar—Ohio Masons Lime—Ohio Ground Lime.

OLENTANGY VILLAGE, Columbus, Ohio
402 Apartment Project — Raymond E. Snow, Arct., Washington, D. C.



MODEX POWDERED CASEIN PAINT
for Interiors • • Sold Through
HANNA PAINT MFG. CO., Columbus, Ohio

Want to Know Why
MODEX Was Selected
for This Project?

There's plenty of competition for paint business when a major project like Olentangy Village is at stake. Modex—the concentrated casein paint in powder form—was selected because it thrives on competition. When the chips are down, Modex has the selling features which really count. It's well to keep these Modex superiorities in mind for future reference—they are important whether you are considering a multiple dwelling project or a simple bungalow.

- ✓ Costs 25% Less Than Any Paste Casein Paint
- ✓ Self-Sizing — Requires No Primer
- ✓ High Light Reflectivity
- ✓ Easy to Mix and Apply — Dries Fast
- ✓ Spoilage-Proof — No Odor
- ✓ Washable and Exceptionally Durable
- ✓ Soft Color Harmony

Send for **MODEX Folder**
THE REARDON COMPANY
ST. LOUIS • CHICAGO • LOS ANGELES

Modex

THE CONCENTRATED CASEIN PAINT IN POWDER FORM



News of the Month

Building Activities and Meetings

Residential Building Volume for May Expected to Set New Record High Since 1929

RESIDENTIAL contracts for the first half of May totaled \$65,312,000, according to F. W. Dodge figures; this represents a gain of 23 per cent over the first half of April, and is the largest half monthly residential volume since 1929. This confirms the current upward trend which has marked the recent revival of home building.

Comparing the figures for the first half of each month this year: January amounted to \$33,000,000; February, \$40,000,000; March, \$45,000,000; April, \$53,000,000, and May, \$65,000,000; these are approximate figures. On this basis the entire month of May should set a new record for the 37 eastern states, with the highest volume of residential building for any month since 1929.

The statistics for the four classes of construction, as recorded during April, follow:

37 Eastern States	May 1-15, '39	May 1-15, '38	April, 1939
Residential	\$ 65,312,000	\$ 39,694,000	\$114,405,000
Non-Residential	38,582,000	28,066,000	94,656,000
Public Works	29,533,000	29,423,000	85,633,000
Utilities	13,152,000	3,193,000	35,336,000
Total	\$146,579,000	\$100,376,000	\$330,030,000

Follin Now with Producers' Council

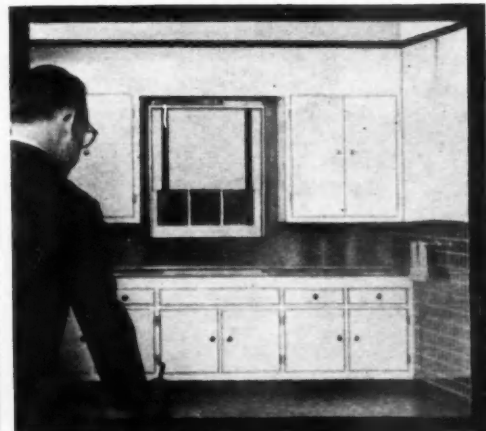
JAMES W. FOLLIN, who has been associated with the technical work of Federal Home Loan Bank Board in Washington, D.C., as chief of the Home Building Service division, has been appointed managing director of The Producers' Council administrative office at 122 East 42nd Street, New York City. The Producers' Council, Inc., is an association of nearly seventy representative manufacturers and associations of manufacturers of building materials and equipment. For 18 years it has been affiliated with The American Institute of Architects to foster a closer and more professional relationship.

A graduate professional engineer, Mr. Follin is a past president of the Philadelphia Section of the American Society of Civil Engineers and for several years he was assistant to the chief engineer of the Pennsylvania Department of Highways.



•JAMES W. FOLLIN

* * *

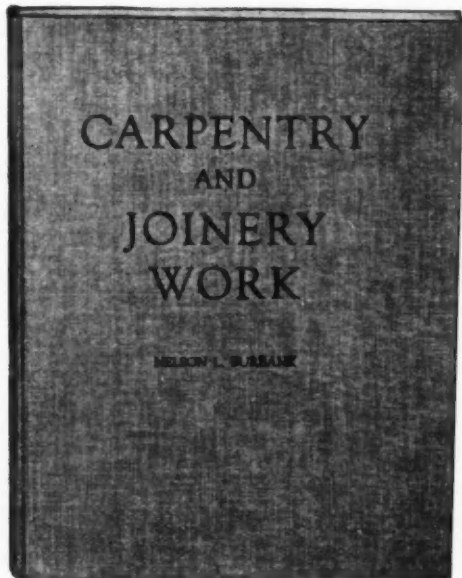


TO BE SEEN at New York World's Fair: A most unusual exhibit of interest to builders is a group of miniature models by Marsh Wall Products, Inc. to portray three key rooms using Marlite—bath, recreation room, kitchen.

CARPENTRY and JOINERY WORK

By Nelson L. Burbank

Formerly Instructor, Building Vocational High School, Cincinnati, Ohio



The new second edition has been thoroughly revised.

The manuscript was carefully checked by a former contractor and ex-editor so that this book combines the practical outlook with the author's trade teaching experience. The cardinal principles of modern residential construction are set forth simply and logically with the aid of many photographs and line drawings. The Second Edition contains 90 revised pages with new illustrations and descriptions of new methods and materials.

The program of study as presented in this latest textbook for students of carpentry work involves class discussion, practical job work and related studies. These include Architectural Drawing, Plan Reading, Carpentry Mathematics, Business English, Applied Science, Civics and First Aid.

280 pages, illustrated, 8 1/2 x 11 inches. Cloth Bound, \$3.00

BOOK DEPARTMENT

American Builder and Building Age
30 Church Street New York, N. Y.

"Mesker Casements Help Sell My Houses" says W. R. Shackleton, topnotch Tulsa builder, "and they're inexpensive too, right in keeping with modern low cost housing."

MESKER

CASEMENTS

Home owners are **sold** on Mesker steel casements... it's their easy working solid bronze hardware, safety washing feature, with greater light and ventilation.

Contractors are **sold** on Mesker steel casements for their economy. Head and jamb trim eliminated. Delivered and installed in one piece with no sash, weights, stops, cords, aprons, or stools to attach.

Dealers are **sold** on them too because they appreciate Mesker's prompt service from their "10,000-window" warehouse stock.

See your nearest Mesker dealer today for complete information and prices.

Mesker
SINCE 1879

MESKER BROS., 424 S. SEVENTH ST., ST. LOUIS, MO.

HERE'S WHAT AUTHORITIES SAY About This Type of Nail!



Red Cedar Shingle Bureau: "Only **HOT-DIPPED ZINC-COATED NAILS** should be used in applying **CERTIGRADE** shingles. The zinc coating prevents all corrosion, and therefore no other type of nail should be used. So-called 'hot galvanized' nails have a coating of zinc so thin that it is useless."

U. S. Department of Commerce (page 6, National Bureau of Standards pamphlet "Wood Shingle Commercial Standard CS31-38"): "Numerous experiments have conclusively proved the wisdom and economy of high-grade nails, and maximum service may be assured by using hot-dipped zinc-coated nails."

Pacific Coast Shingle Inspection Bureau: "Its (the roof's) life depends upon the life of the nails used. Therefore only hot-dipped zinc coated nails should be used."

The Vital Difference— MAZE Nails are HOT-DIPPED!

Maze **HOT-DIPPED** Shingle Nails meet these authoritative requirements on every point. They are *submerged* in molten zinc. They are *completely* coated. Their coatings are *two to three times* heavier than galvanized nails—which are merely sprinkled with zinc and then rolled or tumbled.



SATISFIED CUSTOMERS MEAN MORE BUSINESS

It's good business to give your customers what they should have—Maze **HOT-DIPPED** Asphalt and Wood Shingle Nails (Wire and Cut Styles for wood). Also special nails for all metal roofings. See your lumber dealer—or write direct for samples, prices and further details.

W. H. MAZE COMPANY • PERU, ILLINOIS

Zinclud NAILS

PERSONNEL CHANGES—

E. W. MORRILL has been elected vice president of The Insulite Co., to assume the administration of general sales operations and sales policies of the company. He has been with Insulite since 1926 in sales and development work. . . . **E. H. Batchelder, Jr.**, recently resigned as senior vice president of The Insulite Co., has become vice president of the American Rock Wool Corp. . . . **F. R. Kohnstamm** has been appointed sales manager of the merchandising division, Westinghouse Electric & Mfg. Co., at Mansfield, Ohio.



E. W. MORRILL E. H. BATCHELDER, JR. F. R. KOHNSTAMM

New Lumber Grade Marks for West Coast

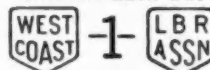
NEW official grade marks have been adopted by the West Coast Lumbermen's Association; the purpose in issuing these new grade marks is twofold:

First: To standardize all West Coast Association stamps in accordance with this pattern. The new stamps will be uniform in design (not in size) for all member mills and rigidly controlled by the Association.

Second: To identify this lumber as of American manufacture. Since the Government no longer requires that imported lumber be marked with country of origin, in the future West Coast lumber manufactured by American mills and labor will be identified as "Made in USA."

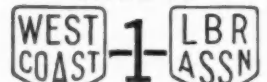
These stamps carry out the purpose of the Domestic Origins Act, which requires that domestic materials be used in public construction. To any distributor or consumer who prefers the products of American industry and labor, the new stamps guarantee West Coast lumber manufactured in the United States.

BROWN LBR. CO.



MADE IN U.S.A.

MILL 10



MADE IN U.S.A.

THE above stamps identify the manufacturer by company name or number; also Standard West Coast Grades are marked by these numbers or letters in the center of the stamp.



AN INCREASE IN SALES AND REMODELING is reported as a result of an extensive advertising campaign being sponsored by real estate boards in Indianapolis, South Bend and Mishawaka, Ind. Local building factors supported these "Buy or Build a Home in 1939" campaigns using billboards (above), newspapers and radio.

WHEN YOU REMODEL STORES

Look Ahead!

Assure Your Clients of a Flooring with a Future—

ARMSTRONG'S ASPHALT TILE



The Park Pharmacy of Long Beach, California, has achieved a beautiful, long-wearing floor of Armstrong's Asphalt Tile by using contrasting blocks of Cinnabar Marble, No. 324 with a field of Travertine Marble, No. 340 in an interesting design.

SOME low-cost floors are here today and gone tomorrow. But you can confidently promise your clients a really *durable* low-cost floor when you install Armstrong's Asphalt Tile.

You can assure them that the beautiful colors and patterns can't wear off because they run right through the full thickness of the material. You can assure them that upkeep is simple—inexpensive.

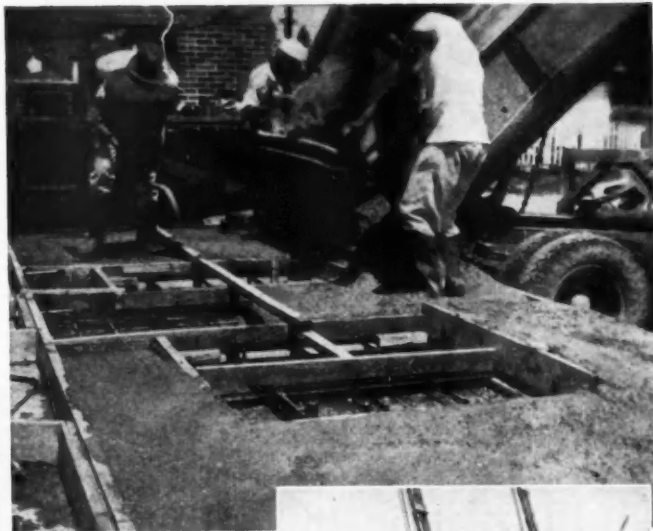
A wide variety of plain and marble effects is obtainable in this versatile flooring. Furthermore, if you are faced with the problem of laying a floor on concrete directly in contact with the ground, tell your clients that this is the only type of resilient flooring that can be used safely. Our color-illustrated booklet is available to help you specify flooring. Just write to Armstrong Cork Co., 1218 State St., Lancaster, Pa.



RUBBER TILE • LINOTILE (OIL-BONDED) • ASPHALT TILE

Armstrong's LINOLEUM
and RESILIENT, NON-CERAMIC TILES

CORK TILE • LINOWALL • ACOUSTICAL CEILINGS



A typical wall being cast in horizontal position with concrete floor as base.



Tilting up wall to vertical position with simple hoists.

New profit for Contractors!

Build houses with "tilt-up" Concrete Walls

Big news for contractors in the residence field is the tilt-up method of building reinforced concrete walls. It cuts costs through the application of higher production methods without large overhead.

With the tilt-up method, the entire side or end of a building, up to 11 feet in height, is cast in one piece horizontally on the concrete floor and then raised to vertical position with one or more simple hoists. Walls are tied together at the corners with cast-in-place columns.

Form work is greatly reduced, as only simple framing is needed. Exterior wall surfaces are easily finished. Labor and form costs are reduced 10 to 30%. Wide variety of architectural styles, wall textures and colors are obtainable.

PORTLAND CEMENT ASSOCIATION

Dept. A6-3, 33 W. Grand Ave., Chicago, Ill.

Please send me Information Sheet CP37 giving procedure for building "tilt-up" walls.

Name _____

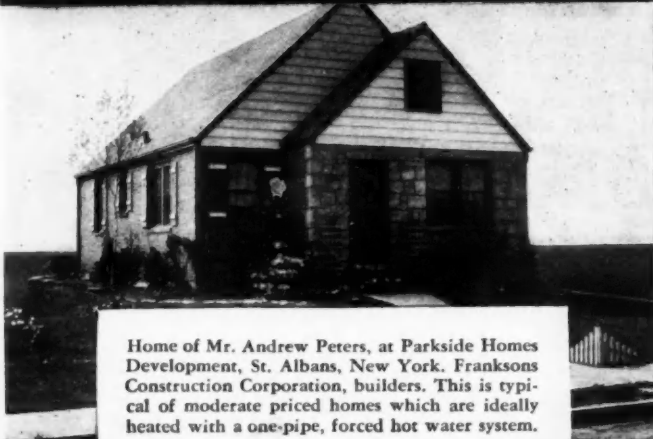
Company or Title _____

Address _____

Now..

RADIATOR HEAT

proves practical for
moderate priced homes



Home of Mr. Andrew Peters, at Parkside Homes Development, St. Albans, New York. Franksons Construction Corporation, builders. This is typical of moderate priced homes which are ideally heated with a one-pipe, forced hot water system.

WITH
U. S. EQUIPMENT

EXPERIENCED builders will agree that hot water heat is the most satisfactory and economical method of heating the type of moderate priced home pictured above.

The original cost of a modern one-pipe, forced hot water system is surprisingly low, varying with geographical location . . . only 7% to 10% of the total building cost.

Such a system would include a Capitol Boiler, Capitol Radiators, U. S. Radiator Forced Hot Water Heating Specialties and domestic water heater. Consult your heating contractor for estimates on U. S. equipment.

UNITED STATES RADIATOR CORPORATION

General Offices: Detroit, Michigan

Branches and Sales Offices in Principal Cities

New Devices and Equipment Provide Added Convenience

All-Metal Outside Venetian Awnings

THE new Rusco Venetian all-metal awnings offered exclusively by the F. C. Russell Co., Cleveland, Ohio, provide year 'round sun protection for windows and doors in homes and all types of public and office buildings. The new awnings deliver a high degree of shade efficiency and cool comfort not found in ordinary window protection. Added advantages are unobstructed ventilation, clear visibility and perfect control.

These Venetian awnings are a permanent part of the building. Once installed, it is not necessary to replace them or provide seasonal handling and repairing.

Armco rust-resisting iron is used in the vanes which are available in five standard colors of enamel finish. Construction stops the heat outside the house and prevents glare; varied degrees of soft light are easily controlled by the finger tip adjustment inside the building.



PERMANENT metal awnings installed on homes or other buildings shade the windows from sun yet allow a ventilated, clear view.

THE VANES of Venetian all-metal awnings are easily regulated from the inside by a convenient finger tip control.

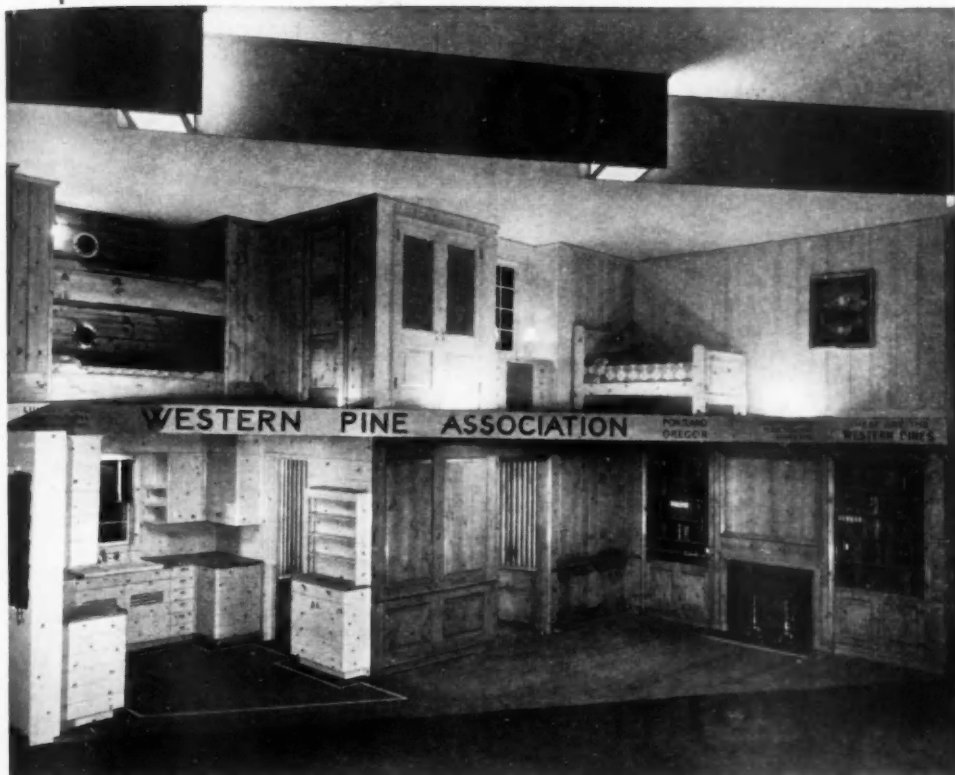
Simplified Upward-Acting Hardware

DOR-WAY garage hardware, inexpensive equipment for upward-acting doors, has been developed by Richards-Wilcox Mfg. Co., Aurora, Ill. This garage door set is particularly adaptable for use on low-cost homes and offers conveniences of higher priced lines. It can be used on doors of thicknesses up to 2 1/4 inches, is installed directly on side wall studding without extensions on extra columns, and can be applied to old doors as well as new ones.

Other features are listed as: One standard set fits any opening up to 8 by 8 feet; door weighs not more than 250 pounds; requires only 4 1/2 inches clearance above top of opening; 1 inch

(Continued to page 100)

Be sure to visit the WESTERN PINES* Exhibit at the NEW YORK WORLD'S FAIR



The preview above shows—the formal living-room; the ideal kitchen; the novel double-deck bunk room; the master's bedroom. The camera could not catch the charming recreation room, with bar.

When you visit the Town of Tomorrow at the Fair do not fail to see the WESTERN PINES Exhibit close by, in Home Building Center.

Here are five typical American rooms, each one rich in suggestions of what may be accomplished with these versatile woods.

For constructive ideas, be sure to see this exhibit, or visit the "Western Pine Home" at the Golden Gate Exposition. Western Pine Association, Yeon Building, Portland, Oregon.

THE WESTERN PINES WILL DO YOUR NEXT JOB BETTER—TRY THEM

- IDAHO WHITE PINE
- PONDEROSA PINE
- SUGAR PINE

THESE ARE THE WESTERN PINES



MIAMI BATHROOM CABINETS MIRRORS and ACCESSORIES



This attractive home was designed by Architect H. L. Schwartz, New Kensington, Pa., for Leon D. Hansen, Pittsburgh. Miami cabinet model 1100, with Tubular light brackets, and recessed shelf model 410, were installed in the master bathroom, illustrated. Cabinet completely wired at the factory, with convenience plug and switch, only one electric outlet was necessary.

Get the Contracts for Finer Houses

In higher priced homes, as well as in the low-cost groups—Miami Cabinet values dominate the field.

Home buyers, especially women, quickly recognize the superior quality of Miami products and are favorably influenced by their style leadership.

With over 140 models from which to choose, low-cost housing types to deluxe ensembles, including lighted cabinets, towel supply and utility cabinets, recessed shelves, etc.—you can meet the requirements of any bathroom. Ask your Dealer or write for Catalog F.

MIAMI CABINET DIVISION ·· The PHILIP CAREY COMPANY, Middletown, Ohio.

**CLOSE YOUR DEAL
IN THE *Basement***



Wise builders know that a good furnace installation is one of their best salesmen—that prospects are more likely to become buyers when they find heating by Payne. For Payne gas furnaces are known everywhere for trouble-free, budget-saving warmth. Warmth that is instantly available, where you want it, when you want it, automatically controlled.

Look into the Payne gas-fired Gravity Furnace for your next building job. You will be pleasantly surprised to find that you can offer the plus of Payneheat without throwing your cost sheet out of line. Follow the example of builders who are selling homes and provide quality where it counts—in the basement.

The Payne Gravity Furnace may be installed singly or in batteries of two or more to provide "zoned" heating. Eliminates long pipe runs and heat wastage. Cuts heating costs.

There is a dealer near you to help figure the job.

Write for further information.



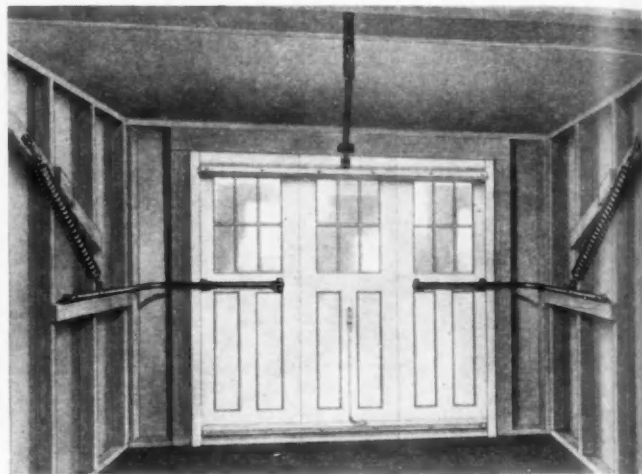
See the Payne Furnace Exhibit on Treasure Island.

- FLOOR FURNACES • FORCED AIR UNITS
- CONSOLES • WINTER AIR CONDITIONERS
- DUPLEX FURNACES • GRAVITY FURNACES

PAYNE FURNACE & SUPPLY Co., Inc.
BEVERLY HILLS, CALIFORNIA

(Continued from page 98)

minimum side wall space required; can be installed on new or old doors at an amazingly low cost; unusually easy to operate; easy to install, few parts; requires no garage room; new long cars easily accommodated; heavy steel tempered springs; easy, fine adjustment; adequately weatherstripped; noiseless in operation.



NEW hardware equipment for upward-acting garage doors is simple, easy to install.

New "Whizz-ard 8" Sander

THE Clarke Sanding Machine Co., Muskegon, Mich., has brought out a new model professional floor sander, the "Whizz-ard 8." Tests show it to be capable of remarkable production. The machine has the Dreadnaught "finger-tip" control, which permits

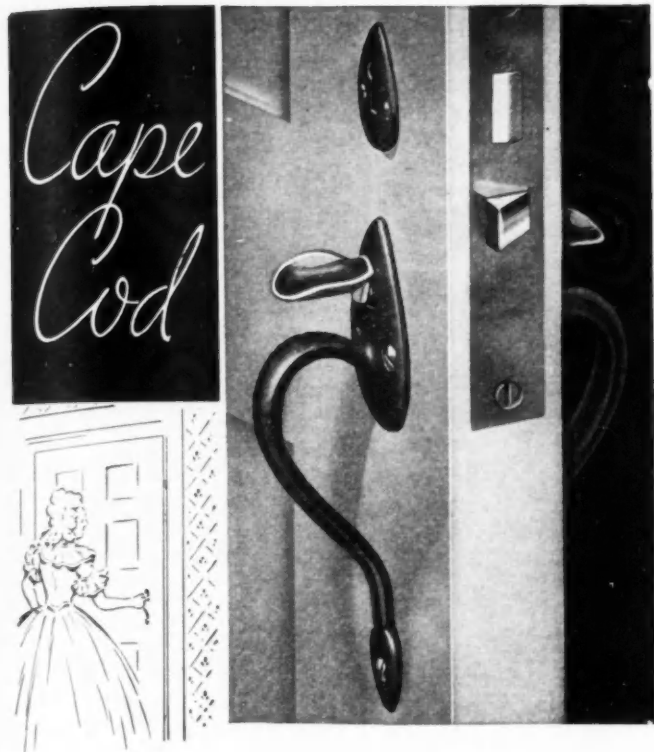
retention of both hands on the handle, yet allows the operator control over the cutting action of the machine. Equipped with a heavy duty 1½ horsepower induction-repulsion type motor, power is transmitted to the large diameter sanding drum by means of a V-belt. The vacuum system insures positive dust pick-up on either the forward or backward strokes. This machine is streamlined in the modern manner and finished in a highly polished aluminum and chromium finish with contrasting royal blue motor and natural finish hard oak handle.



THE NEW Clarke Sanding Machine Co. "Whizz-ard 8"

New Handy Bench Shaper

THE R. L. Carter Division, The Stanley Works, New Britain, Conn., has announced a new bench shaper. A patented holder which can be tilted from vertical position to any angle up to 45 degrees holds the highspeed shaper motor 18,000 R.P.M. under the table. By tilting the motor to various degrees and by using three cutters in combinations of 2 or 3 or singly it is possible to make over 500 different cuts. The top of the shaper is machined steel, 12 x 18 x 3/8 inches. The table stands 8 1/2 inches high, allowing ample clearance for motor adjustment. The same 3/8 H.P. motor can be used in a router base and becomes a versatile tool for routing, grooving, veining, templet and inlay work.

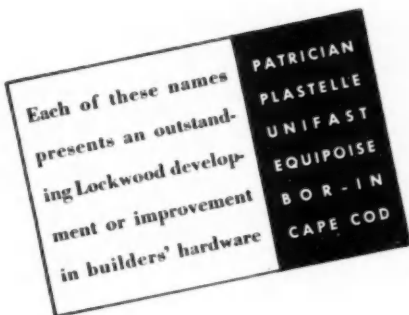


Authentic atmosphere with MODERN CONVENIENCE

Now you can offer your prospects the kind of Colonial hardware they have long admired in the old original buildings, or in the highest priced reproductions of them. Only Lockwood makes this authentic Colonial hardware trim, combined with the convenience and security of modern mortise locks, at a price you can afford to put into a modest residence.

Try Lockwood Cape Cod Sets in your next house. It will get you a lot of attention and help you sell, at a fair profit.

See your Lockwood Dealer or write for complete details on this distinctive lock development and on the entire line of Lockwood improved builders' hardware.



LOCKWOOD

HARDWARE MFG. CO.



Division of
INDEPENDENT LOCK CO., FITCHBURG, MASS.

Whoops!



• Dirty finger marks seem to appear on the walls of the best regulated homes. And Masonite Colored Board makes such blemishes the least of a housewife's worries. This new Masonite Product has a special, satin-like finish that is washable.

All gone!



• Neutral soap and damp cloth are all that are needed to remove finger and other normal dirt marks from Masonite Colored Board. In addition to this lasting color surface, Masonite Colored Board offers valuable insulating properties and real structural rigidity.

Masonite Colored Board is washable!



• Masonite washable Colored Board is available in today's four most popular home colors—oyster white, ivory, green, buff. It is low in cost . . . easy to apply . . . and will give years of service. Of course, you want a free sample and full details about this modern wall and ceiling material. Mail the coupon today.

COPYRIGHT 1939, MASONITE CORPORATION

FREE! **MASONITE** THE WONDER WOOD OF A THOUSAND USES

A Mississippi Product Sold by Lumber Dealers Everywhere

MASONITE CORPORATION, Dept. AB-18
111 W. Washington St., Chicago, Illinois

Please send me a free sample and full details about Masonite Colored Board in

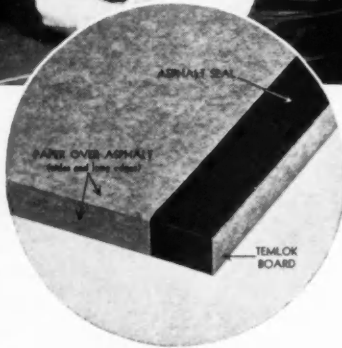
Oyster White Ivory Green Buff

Name _____

Address _____

City _____ State _____

*"Factory-sealed and reinforced
TEMSEAL SHEATHING
...insures lasting insulation"*



"IT'S the only sheathing of its kind! You see, Temseal is made of Armstrong's Temlok, which is a highly efficient fibreboard insulation. This board is factory-sealed with asphalt, and then doubly protected by strong paper reinforcement.

"Perhaps you're wondering just what advantages this type of sheathing has for you? Briefly, it's this: Temseal has great resistance to air and moisture infiltration. That means that its insulating efficiency remains high, and that you don't need to use building paper or felt. Temseal makes buildings stronger and more rigid, too.

"Make no mistake about it: Temseal Sheathing will add both comfort and value to that new house you're going to build!"

Hundreds of builders are telling prospects these facts about Temseal Sheathing—and finding that they help to close sales! Let us send you a sample and complete information. Write today to Armstrong Cork Co., Building Materials Division, 979 Concord St., Lancaster, Pa.



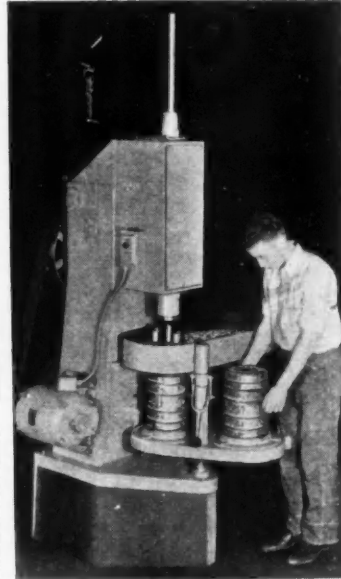
Armstrong's
TEMLOK INSULATION
De Luxe Interior Finishes
TEMSEAL SHEATHING • LATH • MONOWALL

Machine for Making Drain Tile

A NEW, low priced drain tile machine has been recently announced by the W. E. Dunn Manufacturing Co. of Holland, Mich. This new machine is particularly designed for the smaller markets where a large investment in equipment may not be justified. It produces all sizes up to 8 inches at an average production speed of 4 per minute, and may be operated by one or two men, turning out 1000 to 2000 tile per day.

It requires a floor space of only 2½ x 3½ feet and can be operated from a lineshaft or by a 3 HP. electric motor mounted on the machine itself. Material is fed from a reciprocating feeding table equipped with a positive lock.

All bearings are replaceable, bronze bushed and equipped with alemite fittings. Cut gear drive runs in oil, completely encased in housing.

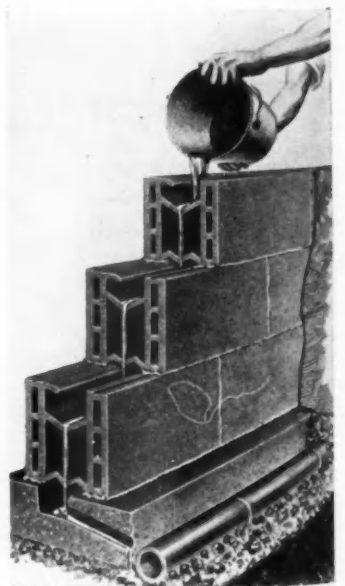


WORKMAN operating new drain tile machine which has a production speed of four units per minute.

"Speedwall" Tile for Dry Walls

WITH walls of Natco Dry-Speedwall tile, manufactured by the National Fireproofing Corp., Pittsburgh, Pa., basements in new homes or other buildings can be assured of permanent dryness and attractiveness. These tile are sanitary, easily kept clean, fire-safe and never need decorating.

Dry-Speedwall tile is furnished either glazed or unglazed in an attractive range of buff shades. The smooth built-in handles in each unit insure quick and easy laying to give low construction cost. The large size of the unit, that most commonly used being 8 by 16-inch face size, and 8, 10 and 12-inch thicknesses, further effects savings in labor and mortar. The theory of Dry-Speedwall construction is shown in the accompanying illustration. Water in quantities, not present under actual conditions, can be poured into upper rows of tile and it will flow down as shown to the bottom of the foundation and out the drain tile. Even under such extreme conditions, no sign of dampness will be apparent on the interior wall surface. Multiple cell design, which gives the dry-wall feature, together with absence of through mortar joints, minimum of cross webs, dead air spaces within the tile, gives extremely favorable insulation value. Thus basements are cool in summer and easily heated in winter.



NEW TILE for basements designed to keep even exceptionally large amounts of seepage water from entering through wall.

Designed right . . . Priced right



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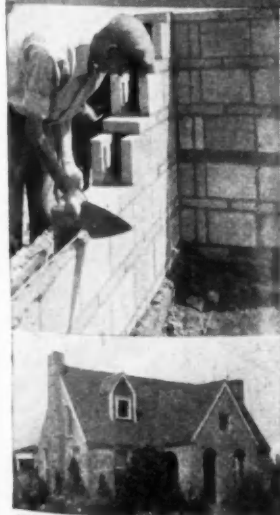
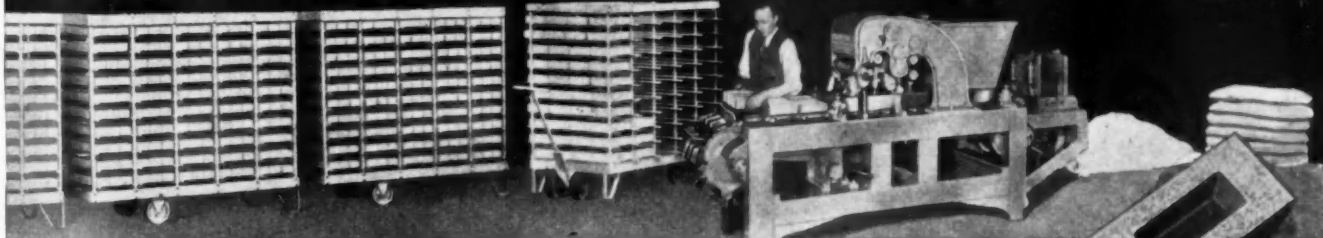
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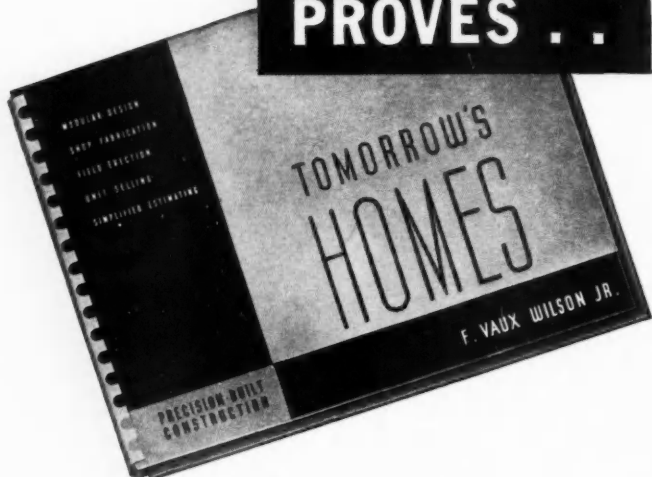
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53

**LETTERS from Readers
on All Subjects**

**Facts, opinions and advice
welcomed here**

Scouts Home Ownership for the Masses

To the Editor:

Cambridge, Mass.

I am glad to make a comment on your April Editorial, "Public Subsidies and Private Housing"; but I am afraid it is not very helpful because I entirely disagree with your premise!

This may be stated more as a conviction than anything else. I cannot prove it. But I am quite certain home ownership is about the worst thing which can be indulged in by the majority of the population and that rental is the inevitable future of a well ordered civilization.

Now, whether the rental units shall be large apartments or detached dwellings is another matter and I think the detached dwelling is indicated for all those people who can afford to own or rent a property large enough so that the detached unit is really detached and has the advantages of detachment.

If a unit does not enjoy the real advantages of detachment, the disadvantages it incurs are too many to be overlooked. Rows of small houses on small lots simply should cease to be, and for that reason I cannot take much pleasure in your proposal.

Now that doesn't mean I think that the USHA program is not too expensive. It is obviously too expensive. The cost of the individual unit of the USHA project seems to me to be altogether too high.

If you were arguing for a smaller form of subsidy for limited-dividend limited-profit rental corporations, I might have been able to agree with you, but it does seem to me that your proposal would augment the very conditions we are all trying to clean up.

JOHN E. BURCHARD,

Director, Albert Farwell Bemis Foundation.

Planning Boards for Better Subdividing

To the Editor:

New York City.

I think your April editorial is most interesting. Your plan seems to me thoroughly sound. I think you are right in saying that more housing could be gotten for less money. It is exceedingly important that you drive home your tax feature. To build large scale tax-exempt communities will simply centralize more and more authority in Washington. As you say, it is a much sounder procedure to get a subsidy and require local taxes to be paid.

There is one very important feature, however, which is not covered in your editorial. The one big gain in your large scale plan of communities is the fact that communities have some organic unit. You are thoroughly right in saying that there are likely to be just overgrown apartments apart from the great urban centers. It would be much sounder to have individual houses in small communities. It is possible to get all the advantages of both procedures. Take your suggestion, but require that the basic design and layout of all local communities, particularly the street layout, be approved by competent planning bodies.

What this really means is that all local real estate developments should be designed better than they are. The local community or county planning body obviously is the organization to pass on this. Just as you now have to have inspection for safety, fire hazards and other matters, there should be detailed inspection of the general layout of the subdivision. This is to the net gain of everyone.

If your divisions are properly planned, it will actually reduce street expense, and, of course, would make them much safer; and they could easily be as well or better planned than the best large scale units.

DR. HAROLD F. CLARK,
Teachers College, Columbia University.
(Continued to page 108)

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EVERY BUILDER NEEDS!**



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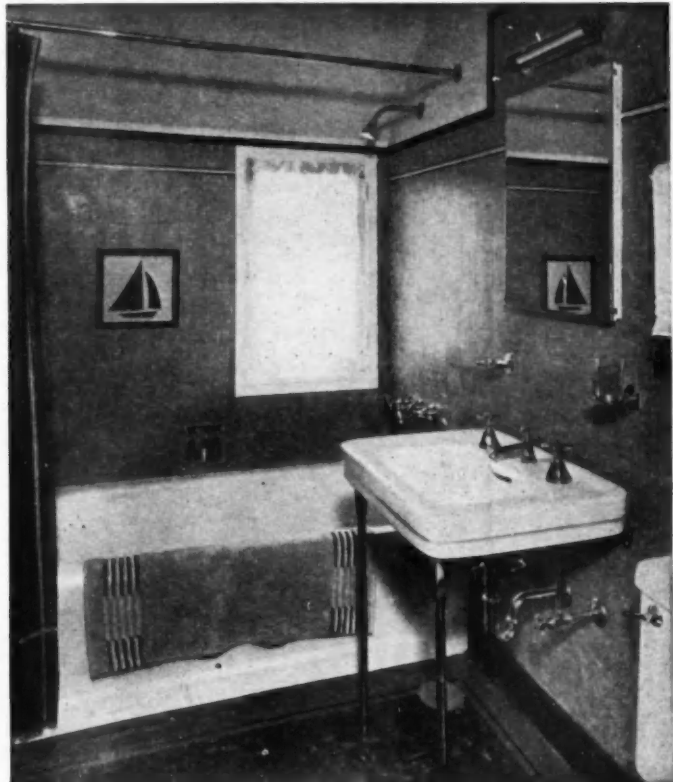
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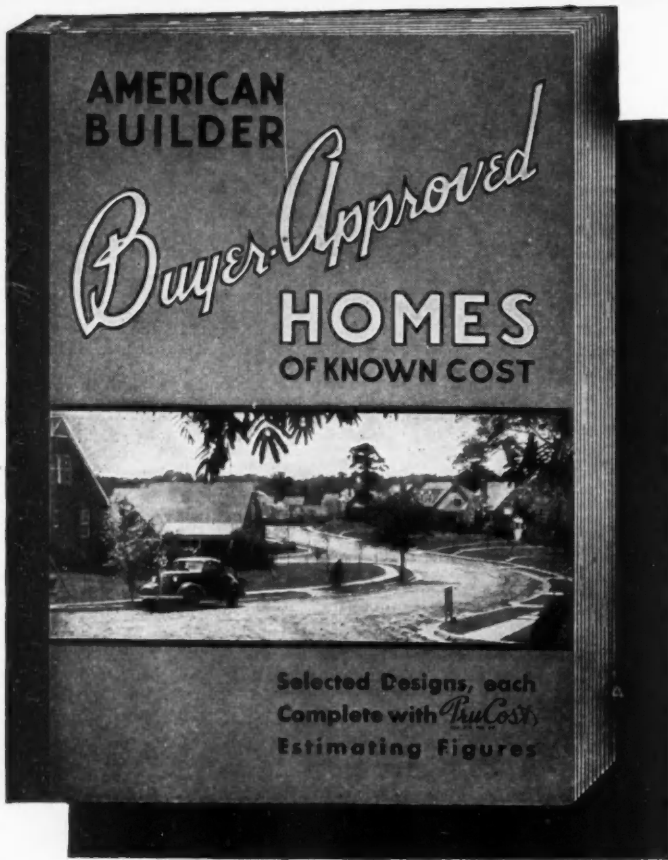
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Today— The Home Ideas

Tomorrow— The Home

But the ideas must precede the completed plans, the contract and the finished home. Most would-be home owners have but little notion of what they want—so many rooms, this or that architectural style, at about such a cost, to fit this or that size and shape lot. For the filling in of the thousand and one gaps between the hazy notion and all the details to be decided upon before a spade can be turned, a piece of lumber can be ordered or a nail driven, they look to their building professionals for suggestions.

180 pages, 8 1/2 x 11 1/2
331 Illustrations—163 Exteriors,
45 Interiors and 123 Plans, Elevations
and Construction Details.

Beautifully covered with extra weight
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It is the function of this new Plan Book, "American Builder Buyer-Approved Homes," to provide a multitude of ideas which enable the client to make up his mind as to what he wants, to see what his home is going to look like, to know exactly what it will cost him. The 96 selected popular homes which it presents—illustrates—and diagrams—are of such wide divergence in style, size and cost, that builders, contractors, architects and dealers everywhere are finding the book a great help in quickly focusing their clients' minds on the details of the coming home and minimizing expensive changes in plan.

FOR INSTANCE—

Do Your Clients' Tastes Run to Colonials?

If so, they can find something to "take their eye" in the 30-odd lovely homes of this ever popular style presented in the book. Among them—

A Modern Version of New Orleans Colonial

furnishing an interesting pattern of bright surfaces and deep shadows. Good cross ventilation and insulated concrete masonry walls keep it as cool as it looks. Seven rooms, with fine entrance doorway and white painted cast-iron overhead balcony. Sun deck on 2nd floor. *As every other home in the book, it provides gracious living at moderate cost.*

The Colonial Charm of Old Williamsburg

is splendidly achieved in a model home at Port Washington, so compactly designed as to give the appearance of being much larger than the only 24x29 feet of its main part. An unusually attractive feature is a walled court at rear between garage and kitchen. *As every other home in the book, it can be built anywhere.*

OTHER Colonials in the book that make a strong bid for reproduction, in whole or in part, include: A picturesque New England Home in Ohio; A Dutch Colonial, near Chicago, with fine detailing; a New Jersey Colonial Home providing an attractive spot for the family to sit on summer evenings; an appealing bunch of Plymouth Haven Homes grouped about a court; graceful 7-room New England Colonial in Iowa; small Colonial for city lot; 6-room Colonial Mass Production Home; "Greenfield" 5-room Colonial; Nantucket Colonial that's a peach; Corner Lot Colonial from the Midwest; charming small Brick Front Colonial Home at Hartford; a 4-level Colonial; impressive Colonial of stone and wood at Evanston; a Long Island Modernized Colonial; commodious Teaneck Colonial; etc.; etc.

Dutch Colonial at Montford Hills

A case study in good design. Its main charm is its simplicity, both in its exterior lines and its refined interior details. The large living room has an exquisite bay window. A well planned dinette, with extensive windows, replaces the conventional dining room. *As every other home in the book, it is the last word in genuine home satisfaction, comfort and convenience.*

Small 6-Room Colonial Beauty

in Connecticut which certainly would be entitled to a Gold Medal in any contest. The exterior is faultless in design. The floor plan is outstanding, in that it provides a downstairs bedroom with a lavatory tucked away behind the built-in garage. Cubage is only 18,500, but it possesses home value out of all proportion to its size. *As every other home in the book, it reaches the ultimate in economy of space and downright, honest-to-goodness livability.*

Lack of space forbids the detailing of the many other Colonials presented, but they are all of equal invitingness.

For further information see the following page



copy of "American Builder Buyer Approved Homes" is included with a paid-in-advance new or renewal American Builder subscription order, accompanied by \$2 for one year, \$3 for two years, or \$4 for three years. To get YOUR copy use the form to the right.

Continued from preceding page.

Modern Rural Homes with all the Modern City Conveniences

Cozy Farmhouse, with connecting passage to implement shed-garage, providing for future changes, shown by dotted lines on the floor plans . . . New England Country Estate Home that reaches a new high in gemlike country home charm. . . . Rambling Colonial in rural Connecticut, with all rooms on one floor except a maid's room and bath over the garage, the floor of which has been dropped. . . . Attractive "Sunset Ridge" Cape Cod Cottage, ideal for pleasurable living beyond city limits . . . and several others that are a gold mine for building professionals who have clients who are tired of city noises, dirt and high living expense.

Progress in Apartments Whose Streamlined Ideas, Inside and Outside, Embarrass the Past

One-story Kansas Apartment Building in which light and air abound, and which offers an advantageous arrangement for small efficiency units. . . . Economical Housing for Two Families in River Forest Manor which offers a very livable 5-room accommodation at a price which shows how substantial economies can be with expert planning. . . . Apartments Designed for Young Moderns at Deerfield, Ill., a four-suite building that looks as though it had been lifted out of a slice of Tomorrow. The building occupies a 50x200 ft. site, has a 4-car garage in the rear and costs about \$20,000. . . . Modern Apartment and Store Building of Unusual Shape and Design in Highland Park, Ill., effecting a pleasing compromise between the commercial side on a business street and the apartment entrance facing a residential street. . . . A compact and attractive Kansas Duplex, the result of improved planning, gives efficient housing for two families.

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Home Designs for Summer Comfort

Week-end Retreat in Willoughby, Ohio, planned for year 'round living. . . . Wisconsin Recreation House for Lakeside Home, with stone fireplace view and an enticing glimpse of a bar in adjoining alcove. . . . Four pages of Lake Mohawk Cottages, including a cozy Rustic Log Cabin, a rough siding and common brick little home, a Cottage with 6-foot fireplace, with screened porch at one end and car shelter at other, and an especially intriguing Cottage for all-year or summer use, with large picture windows, attractive porch with open walkway and a large balcony reached by stairs from living room.

EVERY home presented is "TruCosted", making it a matter of only a few minutes to accurately estimate the local cost of each home, by the aid of the 10 pages of survey figures in some 30 units of construction, the 27 pages fully explaining the TruCost method, and the local unit costs set up by the local building industry men.

Some of the Plus Features In Addition to the Home Designs

Full-page view of a stately Regency Period Stair Hall

Full page of Exterior Detail Highlights in charming doors and window of authentic design

"Correct Interior Details can Add Lasting Enjoyment and Greater Salability to Homes," with two examples of fine detailing.

Garden Terrace of Special Charm Invites Attention

Adequate Wiring Gives 100% Increase in Livability at only 2% Increase in Cost

"New Standards of Convenience are Built in Today's Kitchen," with four views and three plans

A Modernized Basement that Won First Prize in Chicago Contest

"Planning Saves on Plumbing Costs" and gives heightened satisfaction for the home owner

Home Interiors—a Bar, Basement Recreation Room and two Stair Halls—with Plenty of Sales Appeal

"Built-In Mirrors Build Up Profits for Builders."

An unusual Long Island Estate Combination Stable and Garage, housing three horses, two cars and a pony cart

A page of four Special Interior Features that Win Approval—A hospitable New Jersey Dining Room, a Compelling Fire Place Treatment, a gorgeous modern bathroom, and a most attractive living room with built-in bookshelves in Beverly Hills (Chicago)

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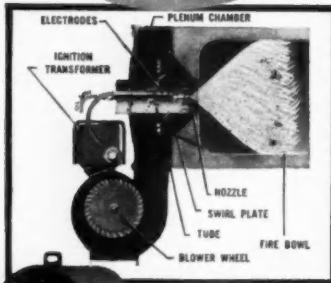
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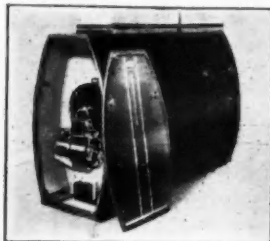
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Tempered-Aire Home Unit

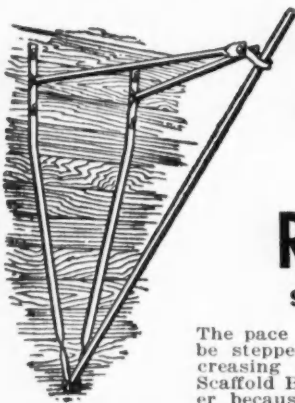


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Letters

(Continued from page 104)

To the Editor:

Houston, Texas.

Along with many others engaged in this business, I have been advocating the direct subsidy to the individual whose income does not permit him to own decent shelter, rather than the present indirect mass housing subsidy that the USHA is indulging in. I also oppose exemption from local taxes for any type of housing unless it be given to all owner-occupied homes. I believe this comes pretty close to the plan which you announce and which the *American Builder* will sponsor in the coming months.

HUGH POTTER, President,
River Oaks Corporation.

To the Editor:

Cleveland, Ohio.

There is much of cogency in your argument for public subsidies for building, but I suspect that we ought to direct more challenge against the validity and long-term helpfulness of having any subsidies for private construction.

LEONARD P. AYRES, Vice President,
The Cleveland Trust Company.

TruCost Estimating Explained

To the Editor:

Marietta, O.

Using your TruCost method, what would it cost an owner to build the house that you show on page 76 of your April magazine?

We would use de luxe interior finish Armstrong Temlok insulation on all walls and ceilings except the living room, which we would finish in knotty pine; there would be an open fireplace in this room. We would also use redwood siding, three-quarter inch oak floor, composition shingle roof and plumbing, but no heating. We have a perfectly level lot with soft, sandy soil.

I see in your special book that you say it takes only ten minutes to get the cost, so I feel I am not taking too much of your time in asking this favor.

PERL O. SPRAGUE,
Electrical Contractor.

Answer:

TruCost contemplates a two-part service under which the publisher surveys the dimensions and physical area of a proposed building, stating these survey figures in some thirty specific "units of construction." This is the first half of the *TruCost* service. The other half is entirely in the hands of the local building industry man, whether building contractor, architect or dealer, who has set up his own local costs for these several "units of construction."

You can readily see that, to any building industry man so equipped with proved cost figures organized on this basis, it is a quick, easy and accurate procedure to price the several "units of construction" and to make their summation, which is the cost of the super-structure of the house design illustrated, and of which the cost is desired. Ten minutes is an ample allowance for this local figuring, and a great many instances reported to us by builders and dealers using the *TruCost* method testify as to its accuracy and dependability.

For a complete analysis of the *TruCost* system and a detailed explanation of the items of material that go into each *TruCost* "unit of construction," we refer you to the *American Builder* of May, 1938, and of February, 1939; also, these have been republished as one chapter in our new book, "Buyer Approved Homes of Known Cost."—EDITOR.

Wants Lower Interest Rate

Marshfield, Mass.

To the Editor:

Here is a bit of home truth, which I hope you will see fit to print, for the building industry has been playing ostrich in regard to it altogether too long. It is this: The rate of interest asked on money lent for private home construction is just twice as high as it ought to be. The maintaining of the 6 per cent interest rate prevents the majority of our people from making any effort whatever to own their new homes. Those who tried it during boom times and got bit will be twice shy and, though building is the business of my family, I for one do not blame them.

(Continued to page 110)

PHOENIX

ALL METAL

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WINDOW CONDITIONING UNITS

THIS new, practical, permanent all-metal Combination Screen and Storm Sash offers the most advanced form of window conditioning. Installation actually pays for itself by saving up to 30% in fuel bills. The frame is permanently affixed to either wood or metal casement—giving all the advantages of screens, storm sash and weather stripping. Made of rust resisting ARMCO ingot iron Paint Grip sheets. Sturdy metal-bound panels of clear Libbey-Owens-Ford glass and bronze screen are interchangeable in 30 seconds. Phoenix Windows are inexpensive and their use will mean dividends in economy and comfort long after they have paid for themselves.

Address inquiries to Dept. AB



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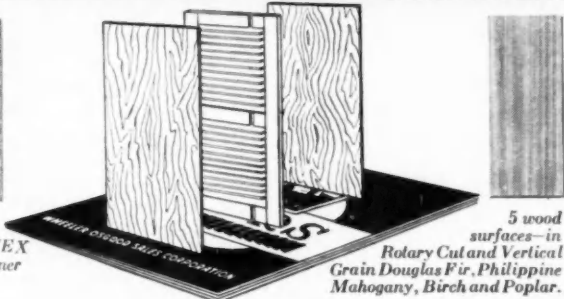
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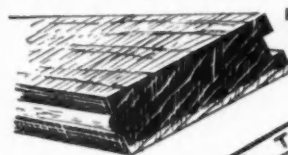


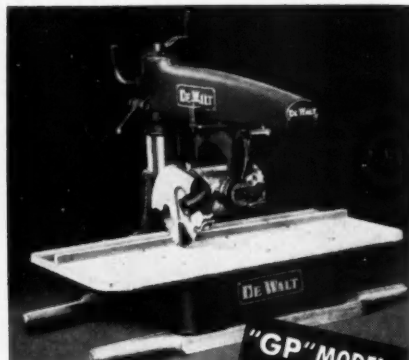
Illustration shows how deeply LIGNOPHOL penetrates the wood.

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Watch it in demonstration! See for yourself how flexible it is—how quickly it can be changed for many different operations! This De Walt woodworker is designed for builders . . . an all-purpose woodworking tool that saves 20% to 30% in building jobs. It's light in weight—can be transported easily. It's fast . . . accurate . . . powerful . . . safe. And it's low-priced! Your savings pay for it quickly. Let us give you a demonstration. Write today.



NEW 1/2 h.p. MODEL GP

Only \$175⁰⁰ F.O.B. FACTORY

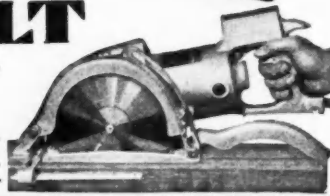
"GP" MODEL
PORTABLE ✓
FAST ✓
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POWERFUL ✓
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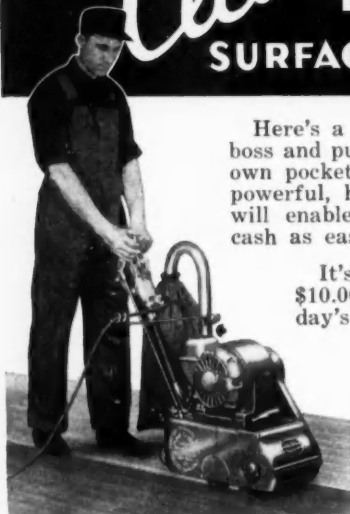
425 Fountain Avenue, Lancaster, Pa.

"The Brute"

of Hand Saws . . . Model D 12" saw . . . with 4 1/2" cutting capacity. Fast . . . Powerful . . . Accurate.



"Clean Up" BIG MONEY SURFACING FLOORS



Here's a chance to be your own boss and put all the profits in your own pocket. Floor sanding with a powerful, high capacity American will enable you to clean up real cash as easy as ever in your life.

It's not unusual to clear \$10.00, \$15.00 or \$20.00 for a day's work. There are no secrets — speed and quality work will do the trick every time the American Way. Sign and send coupon for more free details.

Return Coupon Today

The AMERICAN FLOOR SURFACING MACHINE COMPANY

511 SO. ST. CLAIR ST. TOLEDO, OHIO
Gentlemen:
Send complete details and prices without cost.
 I want to go into floor surfacing business.
 I would use sander in my contracting business.
Name
Street
City State

Letters

(Continued from page 108)

The 6 per cent interest rate narrows the field in which a builder may reasonably seek customers, to about one-fifth of the population. I base my statement on the figures of the report of the National Resources Committee on Consumer Incomes in the United States. I have the report before me. It shows that the remaining four-fifths of the population earns much less than \$2,000 a year. If they borrow money at present rates they take it out of their hides.

I don't think that private building is going to stage any comeback until 6 per cent has ceased being a magic number. If it were cut in half there would be another fifth of our people which could safely attempt home ownership: those earning between \$1,500 and \$2,000 a year. That would make the field of prospects twice as big as it is now.

I know it is argued that 6 per cent is necessary "because of the risk." But I think in nine cases out of ten it is the 6 per cent rate itself which makes the loan risky. Even in boom times it was too high, causing economies which impaired health and upset the family budget. At present it is preposterous.

When will the *American Builder* begin to use its head and help both builders and the public by demanding a flat 3 per cent rate? I know it will take some courage, but it won't do to dodge much longer.

MARION E. LEWIS.

How to Estimate Accurately

(Continued from page 88)

Multiply the largest width dimension of a building by the largest length dimension, as though the building were rectangular. See Fig. 2. Then find the area of each part that does not require sub-floor material such as a kitchen or porch. Also figure the area of those parts formed by the angles and offsets. Add all "take-away" areas and deduct the total amount from the rectangular area. The result is the net area to be covered with sub-floor stock.

To the net area must be added a certain amount of lumber for waste, due to sizing the stock or making it T & G and for the end waste caused when laying it. The following table gives the fractional amounts to add, and allows for end waste which accumulates when laying the sub-floor.

FRACTIONAL INCREASE TABLE FOR SUB-FLOOR STOCK

Size of Stock	1x6 not sized		1x6 SISIE to 5 1/2"		1x6 T&G Stock 5/8	
	straight	diagonal	straight	diagonal	straight	diagonal
Method of laying						
Fractional Addition	1/10	1/6	3/10	3/10	1/4	1/3
Decimal Addition	.10	.16	.30	.30	.25	.33
Constant	1.1	1.66	1.3	1.3	1.25	1.33

Rule: Multiply floor area to be covered by constant given for material to be used and according to the method of laying it. Result equals board feet of lumber required.

A Practical Problem

List the floor joist materials, header stock, bridging and sub-floor necessary for the building illustrated in Fig. 3. The specifications called for the following lumber sizes and spacing.

Joists 2 x 10—16" o.c. Over basement.

2 x 6—16" o.c. Allow one extra joist at c, d, and e, for doubling under partitions.

Header joists required on all outside walls cut in

(Continued to page 112)



Best FOR BUSINESS BUILDINGS

For unfailing dependability and security, plus flexible keying possibilities, specify Barrows Locks.

In a great variety of designs for business and commercial buildings, Barrows precision-bilt locks combine protection with the distinction and character demanded in modern buildings.

Special provision is made for key set-ups that are particularly useful in Office buildings, Apartment buildings, Hotels, Industrial buildings, Schools, etc.

For full particulars on Keying systems . . . write to—

BARROWS

Hardware and Locks NORTH CHICAGO ILLINOIS

A BETTER
DOOR HAS
NEVER
BEEN
DESIGNED!

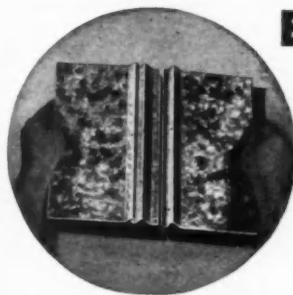
KINNEAR ROLLING DOORS



THE famous interlocking steel-slat door — originated by Kinneare — provides not only all the advantages of convenient, space-saving upward action, but also economy and durability such as no other type of door can match. Why? Because the interlocking-slat design provides an all-steel curtain that resists wear, defies weather and trespass, and repels fire . . . it permanently prevents Kinneare Rolling Doors from sagging, warping, or pulling apart . . . it provides a degree of flexibility that absorbs sharp impacts, and makes accidentally damaged slats individually replaceable. Economy at every point!

Custom construction makes Kinneare Rolling Doors easy and economical to install. Their straight-line pattern harmonizes with any type of architecture in any type of building. Made in any size for motor, manual, or mechanical operation. Write for catalog.

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EDWARDS LOXSEAM STEEL ROOFING

Sheets "snap" together with storm-tight grip.

Covers entire roof like a single piece from ridge to gutters.

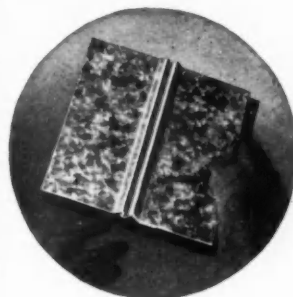
Nails and nail holes completely covered.

Easily and quickly laid over old roofing or on new construction.

Priced for volume sales. Lasts a life time.

Write for LOXSEAM literature and Catalog 92.

The Edwards
Manufacturing Company
542-562 Eggleston Avenue
CINCINNATI, OHIO



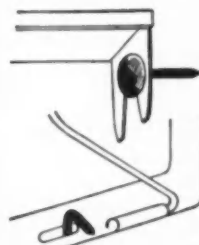
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"The Profit Line of '39"

Extenda is NEW. You can fit all standard windows with a few stock sizes. Adjusted like a curtain rod. Handsome enamel finish over rustproofed steel. Built for long life. Fly-tight in any position. Installed by anyone, without cutting or fitting.

Easy to Install

Two nails at top; two screws at bottom. Fits tight.



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Full information, prices and discounts on request

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For quick action order a sample today. See it. Try it. Show it. You'll be amazed at the sales possibilities. Will ship promptly, subject to return. Just write "Rush Sample."

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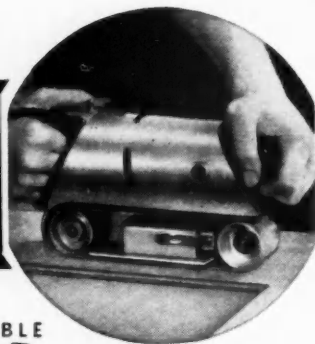
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Deluxe from \$3.00



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A New, Handy
Light-weight, many-use
ELECTRIC SANDER



Portable ELECTRIC **Sander**

Sands Buffs Polishes
Grinds Sharpens
Removes Paint & Varnish

Here's the handiest electric tool you could have in your kit—useful on hundreds of jobs—wherever there is sanding, planing, scraping and finishing to do. Works on many different materials—wood, metal, wall-board, plaster, marble, compositions, etc. Does away with slow hand-work. Produces a smooth, even finish—easier and in hours less time.

SAVES TIME & MONEY

GuildSander weighs only 9 lbs. You can sand overhead without tiring—convenient for the hard-to-reach spots. Wide variety of abrasive belts for many purposes. Runs on either AC or DC current.

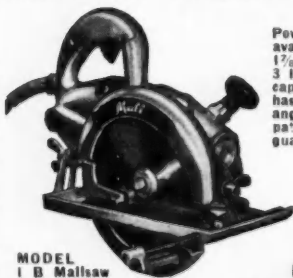
PRICE ONLY
\$46.50
Best of Mississippi
slightly more elsewhere
Convenient Terms

Try this sturdy little tool. Quality-built for years of service—yet you can buy it at a popular price—and pay for it out of savings in a short time. A demonstration is a revelation. See GuildSander at your hardware dealer's, or write direct for full information.

Syracuse Guildtool Co., 1700-61 No. Salina St., Syracuse, N. Y.

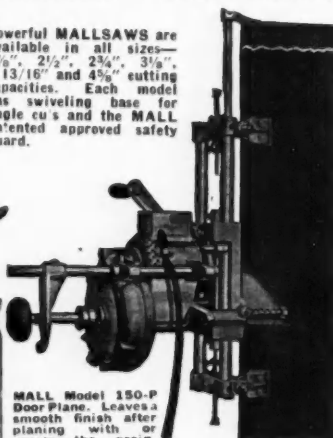
Tools That Speed Up Your Work—Save You Money!

MALLSAWS—DOOR MORTISERS—DOOR PLANES



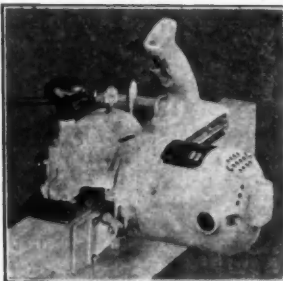
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Powerful **MALLSAWS** are available in all sizes—1 7/8", 2 1/2", 2 3/4", 3 1/2", 3 13/16" and 4 5/8" cutting capacities. Each model has swiveling base for angle cuts and the **MALL** patented approved safety guard.



MALL Model 150-P Door Plane. Leaves a smooth finish after planing with or across the grain. Ten times faster than a jack plane.

Mall Lock Mortiser



MALL Model D Electric Lock Mortiser. Cuts both the lock barrel mortise and face plate recess at the same time. You can mortise 45 to 50 doors per hour with this efficient tool.

MALL DOOR PLANE
WRITE FOR DESCRIPTIVE FOLDER—NO COST OR OBLIGATION!

MALL TOOL COMPANY
7737 South Chicago Ave.
Chicago, Illinois

Please send additional information on **MALL** portable power tools.

Name
Street
City State.....

How to Estimate Accurately

(Continued from page 110)

between joists and at girders a and b.
2" x 3" herringbone bridging is required over basement—one row at left side and two rows on right side.
Sub-floor 1 x 6 SISIE laid diagonally.

SOLUTION

1. **JOISTS (2" x 10")**
22 x 3/4 equals 16 1/2 and called 17. 17 plus 1 equals 18 pieces required.
Lengths are 17'-6"; called 18'-0" and 19'-6"; called 20.

Therefore 18 pcs 2" x 10"—18'-0" floor joists.
18 pcs 2" x 10"—20'-0" floor joists.

2. **HEADER JOISTS (2" x 10")**
Three required: one each for outside walls and one over girder "a".
Length is 22'-0" or its equivalent such as 10' and 12'.
Therefore: 3 pieces 2" x 10"—22'-0" header joists.

3. **JOISTS (2" x 6")**
36 x 3/4 equals 24. 24 plus 1 equals 25. 25 plus 1 (for doubling) equals 26 pieces.

The 15'-0" span requires 26 pieces 2" x 6"—16'-0".
The 22'-0" span requires 24' joists (to get good bearing on girder at "b"). Number of pieces is 14x3/4 equals 10 1/2; called 11. 11 plus 1 equals 12. 12 plus 1 (for doubling) equals 13 pieces.

The center section requires joists 18' long.
Number of pieces is 12 x 3/4 or 9 pieces (none need to be added as the section each side of the center section has had one additional joist added. (See above) 9 plus 1 (for doubling) equals 10 pieces required.

Therefore: 26 pieces 2" x 6"—16'-0"
13 pieces 2" x 6"—24'-0"
10 pieces 2" x 6"—18'-0"

4. **HEADER JOISTS:**
East wall requires 26 linear feet
West wall requires 36 linear feet
Header at "b" requires 36 linear feet

98 linear feet are required

5. **HERRINGBONE BRIDGING:**
Three rows are required over the basement as shown on the plan.
3 x 22 equals 66 linear feet of distance to be bridged.
66 x 2.25 (constant selected from the bridging table) equals 148 1/2; called 150 linear feet of 2" x 3".

6. **SUB-FLOOR:**
Area of building is 37' x 58' less the "take-away" areas.
37' x 58' equals 2,146'

Take-away areas:
4 x 12 equals 48
8 x 22 equals 176

224

Net floor area is 1,922 sq. ft.
1,922 x 1.3 (constant selected from the sub-floor table) equals 2,498.6; called 2,500 board feet of lumber.

7. **THE LUMBER BILL** for the floor unit is therefore:

18 pcs 2" x 10"—18' SIE floor joists
18 pcs 2" x 10"—20' SIE floor joists
3 pcs 2" x 10"—22' SIE header joists
26 pcs 2" x 6"—16' SIE floor joists
13 pcs 2" x 6"—24' SIE floor joists
10 pcs 2" x 6"—18' SIE floor joists
98 linear feet 2" x 6" SIE header joists
2,500 board feet 1" x 6" SISIE sub-floor stock

SPEED UP

Your Double Hung Window Installations With

DUPLIX ADJUSTABLE SASH BALANCES

Duplex is simpler to install—eliminates weights and pulleys. One Duplex Balance does the work of two ordinary balances. Duplex may be adjusted to perfect balance after installation.

Builders everywhere are taking advantage of these time-saving and cost-saving features of Duplex Adjustable Sash Balances. It is the only sash balance on the market which offers this three-point superiority—*plus flat installation* within an opening in the pulley stile, which allows narrow mullions and casings.

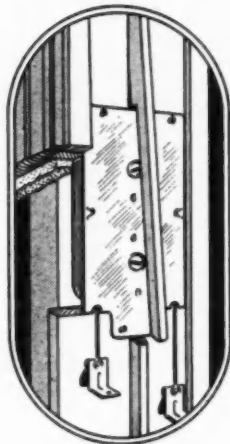
And That's Not All!

Duplex' patented glider hooks prevent rattling or jamming. Four sizes meet all standard requirements. Plaster-tight steel casing. Permanently lubricated. Duplex is guaranteed for the life of the building. Duplex costs less than sash weight installations or non-adjustable single spring balances.

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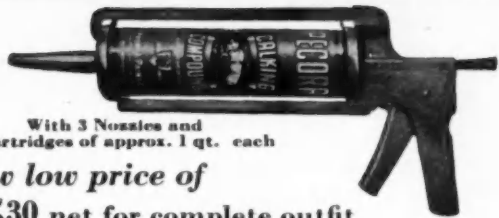
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Ask about our new
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◆ NEW 1939 ◆
STREAMLINE
HIGH PRESSURE CARTRIDGE
CALKING GUN

This Gun



With 3 Nozzles and
4 Cartridges of approx. 1 qt. each

At a new low price of
\$530 net for complete outfit

The increased demand for this dependable gun makes possible this attractive low price. The best calking gun developed by practical experience for present day use. Forces compound under high pressure into building joints, especially around window and door frames. Metal cartridges changed in a few seconds. No messy re-filling. No waste. No loss of time. Cartridges contain Pecora Calking Compound, unsurpassed in quality and reliability. It will not dry out, crack or chip when properly applied. Used by leading builders everywhere.

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Pecora Paint Company, Inc.

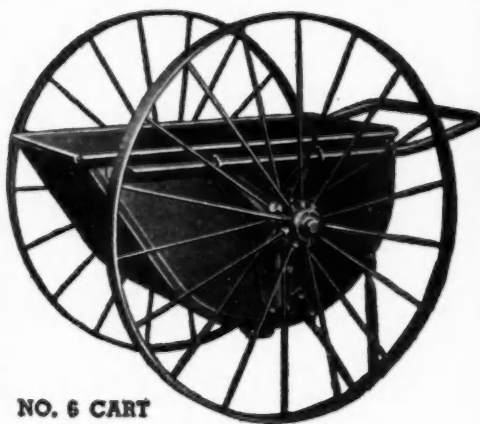
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THIS IS THE STRONGEST CART MADE

Tray is 12 Gauge—6 Cubic Feet Capacity. Wheels 42 Inches Diameter. Flat or Oval Tires, with Plain or Roller Bearings. Trunnion Axles.

EASILY WHEELED • EASILY DUMPED

STERLING WHEELBARROW CO.
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New 1/2 Bag End Discharge Titrator

Again!
IT'S CMC.

THE PROFIT LINE FOR '39!

Why beat around the "bush"? When you buy equipment you expect it to make money for you. Features are important, but all important is the **BIG QUESTION**—will it pay? The new CMC Line answers your profit question 100%. Don't buy until you see the new CMC Mixers—Dual Prime Pumps—Hoists—Saw Rigs—Pneumatic Tired Carts and Barrows.



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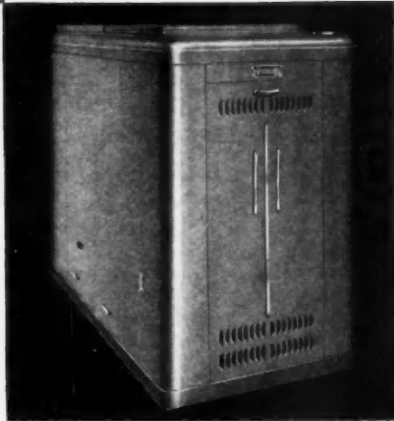
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A Size and Price for Every Type of Home!

Today, women just won't put up with cooking odors, greasy fumes and smoke spreading all over the house—they're bound there'll be an exhaust fan in their next kitchen... or else! That's why, nowadays, smart architects and builders are putting Victor In-Bilt Ventilators in all their houses. Victor In-Bilts are offered in three models for homes and apartments of every size and any type of construction—even for small low-cost homes where price is important!



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Your Free copy of the Victor Ventilation Data Book contains complete details on Victor In-Bilt models. Send for it today!

VICTOR ELECTRIC PRODUCTS, INC.
3009 Robertson Avenue Cincinnati, Ohio

VICTOR In-Bilt VENTILATORS



Model Home Workshop

(Continued from page 83)

ready for use with a chisel when cutting across the grain of the wood.

At first glance the novice may wonder why there are so many screw drivers in the workshop. But the man who uses tools to any extent will realize that the different drivers are used for a wide range of jobs. The four drivers with the special tips will drive the entire size range of the new type Phillips Recessed Head Screws. There are short, stubby screw drivers for close quarter work, drivers with long, narrow blades for use when screws are driven below the top surface, offset screw drivers with tips at both ends, handy for tightening or loosening screws in tight places. There are screw driver bits, too, in various sizes to use with a brace on heavy work.

The exhibit includes a variety of hammers—nail, ball pein, tack, riveting and soft face hammers. The soft face hammer is used for hammering on metal without denting or marking the surface. It differs in construction and appearance from the conventional type of hammer. The head has a cylindrical steel center, anchored securely to the handle, and is capped at both ends with tips made of a tough cellulose material. When the tips become worn they can be twisted off and new ones forced on.

On the bench at the left are power tools that carpenters and expert woodworkers choose to do certain jobs faster and more easily than is possible with hand tools.

The Bench Grinder has a slow speed that is just right for sharpening edge tools. One of the wheels is made especially for this work and the Grinder is equipped with an attachment to hold plane irons up to 2 5/8 inches wide and chisels of any size while grinding to a fine cut. The other wheel is built for general grinding work. The Grinder is also equipped with an adjustable light and safety eye shields to protect the operator from flying steel particles.

Perhaps the most ingenious of the electric tools in this exhibit is the portable Router. The motor operates at a speed of 18,000 revolutions per minute and fits in a hand base. With this tool and different bits that fit into the chuck, beading, fluting, veining, grooving, rabbeting and many other woodworking jobs can be done as easily as you shave with an electric razor. The operator merely guides the tool with the handles on the base and the fast revolving bit does the work. The same motor unit can be used with a table and with special cutters to make all kinds of moulding cuts, tonguing and grooving, inlay work and other shaping cuts. One of the outstanding features of this versatile tool is that it operates direct from a light socket and requires no belts or pulleys.

There are two electric drills among the power tools. Any carpenter knows just how much time can be saved with an electric drill when there's a job that requires considerable boring of holes. These two particular drills, 1/4 inch and 3/16 inch capacities, were selected to cover drilling needs in the home workshop.

The work benches are certainly worthy of mention. They are made entirely of maple and are assembled with drawer bolts and lag screws. The top measures 57 x 25 1/2 inches and is 1 3/4 inches thick. It stands 32 inches from the floor. It makes a sturdy, practical work bench for the man who enjoys woodworking as a hobby and who intends to turn out some real woodworking projects at home.

If you're at all interested in tools, by all means see this exhibit at the New York World's Fair. Planned carefully by Stanley Tools it gives Fair visitors a good display of modern tools and at the same time it shows men how a workshop can be built into small space in a new home.



"Storm damage most
On New England coast"
Jack reads, but hasn't a care,
He is warm and secure
His home will endure
With shingles from Robert McNair.

ROBERT McNAIR SHINGLE CO.
VANCOUVER, BRITISH COLUMBIA
"OVER 400 DEALERS TO SERVE YOU"

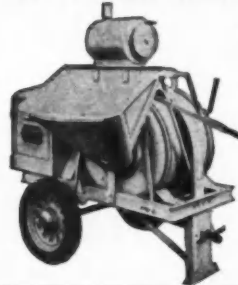
BIGGEST NEWS IN SMALL MIXERS!

Patented Jaeger "V" Spot Drum

"Speedster" 3 1/2 S with Air-Cooling Engine That Use on Jobs

Hundreds of Pounds Lighter - Compact, Husky, Easy Handling, on Springs Timkens, Pneumatics - and with Handy End Discharge

BOTH JAEGERs — BOTH MONEY-MAKERS



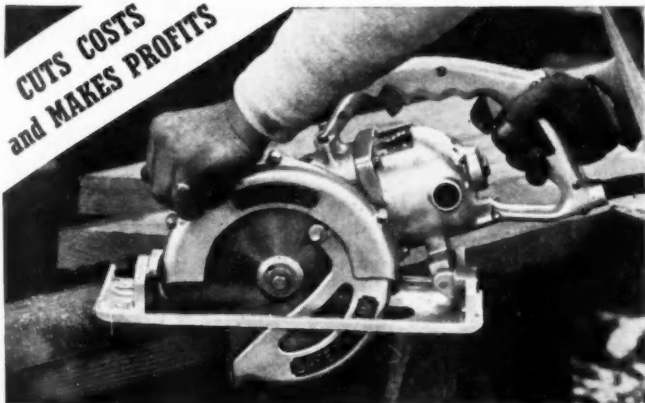
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Load next batch while you mix and discharge — no waiting — 30% to 40% more yardage daily, all your job can handle. Saves you about half the cost of heavy 55 Non-Tilts. Get new catalog and prices.

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521 Dublin Avenue Columbus, Ohio

CUTS COSTS and MAKES PROFITS



STANLEY SAFETY SAW WITH DUPLEX HANDLE

Stanley's exclusive Duplex Handle, with two grips and two switch-triggers, makes the W-7 Safety Saw convenient and easy to use in *any* position. It has that comfortable "feel or hang" that speeds up work, whether operated with one or both hands on flooring; or for work on scaffold, sawhorse or bench. With just one simple adjustment for depth of cut, it rips through 2 1/2" lumber, or bevel-cuts 1 7/8" lumber at 45°.

Other Stanley Safety Saws have 1 7/8", 2 3/4", 3 1/4", 4" and 6" cutting capacities—ask your Stanley Distributor for a demonstration. Or write for Descriptive Folder. **STANLEY ELECTRIC TOOL DIVISION**, The Stanley Works, 133 Elm Street, New Britain, Conn.

STANLEY ELECTRIC TOOLS
"COST LESS PER YEAR"

SAVE \$100 PER DOOR ON INSTALLATION OF CLOSET DOORS with this New AUTOMATIC INSIDE LATCH!

JUST USE A "SNUGGER" HERE...

... AND SAVE ALL OF THESE ...

- THERE'S NO MORTISING
- NO LATCH AND LOCK SET... a big saving in time and labor.

INSTALLS WITH 4 SCREWS

- Snugger needs no fitting or mortising—installs with a screw-driver. Closes the door and holds it snugly shut with a 6 lb. pull. Use with an ordinary pull-knob.

Snugger is positive in action, always works... cuts costs without lowering utility. Husky, fully automatic and invisible. Also fine for Screen Doors. Ask your Hardware Dealer—and start saving money NOW!



WIN-DOR Snugger
INVISIBLE • AUTOMATIC

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404A No. Wood St., Chicago

Please send full information on your new Series 48 SNUGGER for saving costs on Closet Doors.

Name.....
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Also made in a smaller size that saves money on Cabinet Doors

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LOW COST OIL HEAT



FOR THE BETTER SMALL HOMES

X-80 WINTER AIR CONDITIONER

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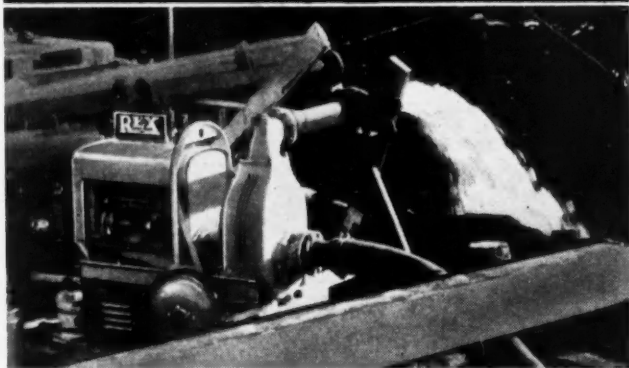
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ROUND OAK

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PAY LESS FOR PUMPING



With REX SPEED PRIME PUMPS

The PUMPS
with the
Z-METAL
IMPELLERS



SPEED PRIME PUMPS

It costs less to keep the job dry when you're using Rex speed prime pumps, because they prime faster, hold their prime longer and will keep on pumping on more jobs for more years to come! The big Rex 2-Metal impeller stands up over longer periods of time because it's made in Z-Metal, far more resistant to corrosion and abrasion. The patented Rex "peeler" literally peels the air from the pump, gives Rex the fastest priming time of any self-priming contractor centrifugal pump. Send for the catalog "Pay Less for Pumping," which describes the complete line from the little 2" 7M to the husky 8" 125M. Address the Chain Belt Company, 1621 W. Bruce St., Milwaukee, Wis.

NEW INFORMATION— CATALOGS OFFERED

Readers Wanting to Receive Any of the Catalogs and Data Sheets Listed in This Department Should Write on Their Business Stationery Direct to the Manufacturer. When Writing, Mention This Department of American Builder and State Your Occupation or Business Connection.

"INDUSTRIAL POWER COST RECORD"—A 16-page record book, 8 by 11 inches, with blank pages conveniently ruled for keeping daily expense record and operating data on tractors and trucks. The record is so simple that it requires no book-keeping help. The owner or operator can keep it up to date himself with only a few minutes' attention. Clear and complete suggestions are included for keeping cost records, and specimen cost record forms are illustrated.—INTERNATIONAL HARVESTER CO., 180 N. Michigan Ave., Chicago.

"HOW TO GET MORE BUSINESS"—A 28-page portfolio of photographs with descriptive text shows many types of up-to-date store fronts restyled with Pittco products. Many are modernizing jobs, and the contrast with the old style stores is spectacular. Addressed primarily to the store owner or manager, this book will be very helpful for builders interested in store construction and store remodeling.—PITTSBURGH PLATE GLASS CO., Grant Bldg., Pittsburgh, Pa.

"THE GLASS AGE ARRIVES"—A 16-page de luxe brochure presenting the Pittsburgh Corning "PC" glass blocks. Many photographic examples are presented showing architectural and decorative results secured by the use of these blocks in homes, commercial buildings and public buildings. Working details of installations and technical data are included.—PITTSBURGH CORNING CORP., Grant Bldg., Pittsburgh, Pa.

"CONCRETE SHORE PROTECTION"—A timely addition to the P.C.A. reference library is this 32-page handbook on ways and means of protecting shore property along water fronts of all kinds. Photographs show many examples of sea walls; their design and construction are adequately illustrated and discussed.—PORTLAND CEMENT ASSN., 33 W. Grand Ave., Chicago.

"MESKER METAL WINDOWS"—A reprint of the 24-page catalog appearing in the 1939 Sweet's. It presents specifications, standard sizes, installation details, etc., about the Mesker residential casements, basement, utility, security and pivoted and projected sash.—MESKER Bros., 424 S. 7th St., St. Louis, Mo.

"STANDARD GRADING RULES FOR THE WESTERN PINES"—A vest pocket reference book presents the revised 1939 grading rules for Ponderosa pine, sugar pine, Idaho white pine, larch-Douglas fir, white fir, Engelmann spruce, incense cedar and red cedar lumber. Measurement and tally, definitions of defects, reinspection and numerous specific examples of proper lumber grading are included. The Association standard patterns for drop siding, beaded ceilings, floorings and other standard millwork patterns are included.—WESTERN PINE ASSN., Portland, Ore.

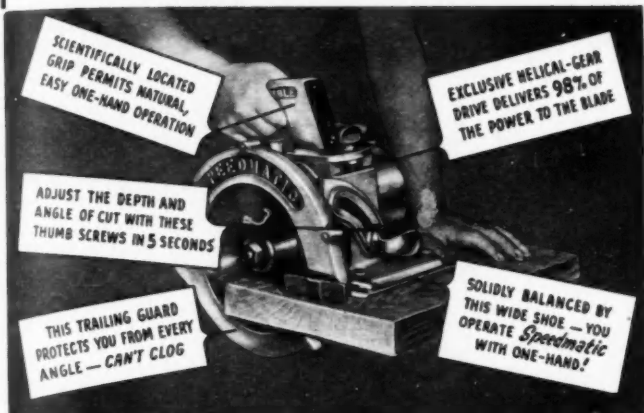
"WRIGHTEX RUBBER FLOORS"—A new 6-page broadside illustrates in their true colors ten examples of rubber tile flooring. An imposing list is included, naming the banks, stores, club houses, schools, universities, churches, hospitals and public buildings in which Wright rubber floors have been installed.—WRIGHT RUBBER PRODUCTS CO., Racine, Wis.

"BUILD BETTER BUILDINGS WITH POTTSKO LIGHT-WEIGHT CONCRETE UNITS"—A 12-page data sheet on Pottsko lightweight aggregate, which is now a Celotex-sponsored product. Clear photographs and text show what Pottsko is, how it is used in concrete precast units, the strength and other characteristics of these units, and their utilization in buildings.—THE CELOTEX CORP., 919 N. Michigan Ave., Chicago.

(Continued to page 118)

Rip Through Your Work in a Hurry! CROSS-CUT Your COSTS

with **Speedmatic** ELECTRIC SAW



All these outstanding SPEEDMATIC features result in *three major benefits* for you: SPEED which will make extra profits for you—POWER ample to handle the heaviest cuts—STAMINA to stand up under constant use without costly repairs or loss of time.

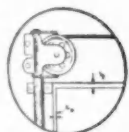
Anywhere from 5 to 20 times faster work is SPEEDMATIC'S record on jack-rafters, framing or studding, stair stringers, joists, dados, flooring, sheathing. These are proved facts! SPEEDMATIC pays out on a surefire basis because its big list of mechanical advantages guarantee maximum performance.

Write today for full details. Ask for your copy of "Manual on Use of Electric Hand Saws in Housebuilding." Sent FREE.

PORTER CABLE MACHINE CO. 1700-05 No. Solino St. Syracuse, N. Y.

ALLITH 50-50 PUSH-OVER DOOR HARDWARE

Easy to Put Up—Easy to Use



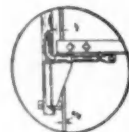
Pulley rests in top of side track—always in place.



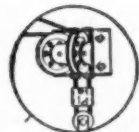
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Top hanger and lock built in one unit.



Side fixtures. Guides are also safety locks.



Double pulleys are ready-spaced for you—self aligning.

All these and many other exclusive features are built into Push-Over sets to save you time.

AUTOMATIC OPENER AVAILABLE

ALLITH-PROUTY, INC. DANVILLE, ILLINOIS

HOW QUICKLY CAN YOU Figure the Number of Face Brick Required for a Two-Story House 26' x 32'?

You'll Find the Answer to This and Hundreds of Other Estimating Problems in—

Schaefer's **NEW** Book "ESTIMATING TABLES"

containing over 80 Pages of Estimating Tables, Charts and Illustrations covering all Types of Brick, Tile, Cinder Block, Stucco, Concrete, Cement and Plaster Jobs—Large and Small!

Here is the most practical Estimating Book ever compiled! It doesn't tell you how to estimate . . . it *actually* does it for you! Eliminates hours of tedious figuring . . . every job is accurately estimated for you. Eliminates costly mistakes . . . pays for itself many times over in TIME and MONEY saved! Price, post-paid only \$10.00. Sent on 5 DAY FREE EXAMINATION which permits you to study it and use it in estimating your own jobs.

Order your copy of Schaefer's "ESTIMATING TABLES" now! Descriptive literature sent on request.

ALBERT F. SCHAEFER

1053 CHILI AVE. ROCHESTER, N.Y.

*Quiet effortless operation
Snug all-weather seal
True slender-line beauty*

PRICED FOR SMALL AS WELL AS LARGE HOMES

EMBASSY

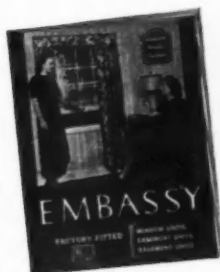
America's Window Beautiful

FACTORY-FITTED

Window Units
Casement Units
Basement Units

—has caught the housewives' fancy. The slender-line design satisfies their sense of good taste. And, of course, women appreciate the unusual ease with which EMBASSY Windows raise and lower.

Because most women are essentially practical, the superior weather-stripping, snug enough to exclude dust as well as reduce fuel bills, appeals strongly to their sense of economy.



ROACH & MUSSER CO.

626 Grand View Ave., Muscatine, Iowa

PLEASE SEND CATALOG OF COMPLETE EMBASSY LINE.

NAME _____
ADDRESS _____
CITY _____

NEW EBCO
Dishwashing
SINK



THE SINK I'VE ALWAYS WANTED

FOR ANY CABINET TOP
... in home or apartment

America's most talked-about sink! A beautiful, new, work-saving sink that appeals instantly to every woman. Two compartments make dishwashing amazingly simple—no dishpan or tea kettle needed! Racked and rinsed in rubber-dipped drain basket, the dishes steam dry themselves. But also look at these unique features! Concealed spray and swing-spout mixing faucet is mounted on back ledge which also contains integral soap dish. This eliminates in-the-wall piping, and simplifies installation. Flat rim also insures watertight fit with tile, linoleum, metal or composition sink tops. Made of genuine cast iron, porcelain enameled in a choice of colors. Large sediment-filtering duo strainer. A sink sensation moderately priced!

Write for details!
DISTRIBUTORS WILL ALSO FIND THEM INTERESTING

Have You Learned About EBCO'S NEW SINGLE-BOWL SINK? It Offers A Number Of Novel Improvements! Write Today!

The EBCO MFG. CO.
401 W. TOWN ST. COLUMBUS, OHIO

TRAILSMITH

7-S or 10-S



Spring-mounted axle — Roller bearing auto type wheels — Oversize low pressure pneumatic tires — Automatic skip vibrator — Enclosed gear reduction — Multiple V-belt drive — Vertical syphon-type tank.

Compact, lightweight trailer mixer. Tows behind car or truck at fast driving speed. Husky, "able-to-take-it" construction. Famous end-to-center mixing action. Write for descriptive bulletin.

THE T. L. SMITH COMPANY
2849 North 32nd St. Milwaukee, Wisconsin

SMITH MIXERS
THE BOULDER DAM MIXERS

Catalogs Offered

(Continued from page 116)

"COMPLETELY INSULATED FOR ONLY \$93.30"—An 8-page pamphlet showing how little it costs to insulate various sized homes. Diagrams and pictures help to tell readers how modern wall construction using Celotex products economically insulates houses against heat and cold. Folder also explains why at the same time the application of insulation provides a vapor barrier to prevent harmful moisture condensation within walls.—THE CELOTEX CORP., 919 N. Michigan Ave., Chicago.

"PLANNING THE MODERN KITCHEN WITH CONVENIENCE"—An 8-page brochure explains the I-XL Photo-Plan for builders, dealers, architects, to help them visualize to their clients and customers exactly how a kitchen will look when equipped with the recommended assembly of I-XL kitchen units.—I-XL FURNITURE CO., Goshen, Ind.

"NEW SINKS BY CRANE TO SUIT TODAY'S TASTE"—An attractive folder presents the Crane "Homemaker" which is described as America's most practical sink for the small home; also the "Kitchen Queen," a big roomy double drainboard sink, and the "Kitchen Pride," a compact two-compartment sink. Each of these new Crane sinks has the under space completely and cleverly utilized for drawers and cabinets. Provision is made on this new folder to imprint the name of the local merchant.—CRANE CO., 836 S. Michigan Ave., Chicago.

"FIREDRAIRE, NEWEST IN HOME HEATING"—An attractive little mailing piece illustrates the Firedraire fireplace which really is a complete heating plant for low-cost cottages and apartments. It burns coal, wood, coke.—THE EDWARDS MANUFACTURING CO., 452 Eggleston Ave., Cincinnati.

"FOR YOUR COMFORT AND HEALTH"—A condensed vest pocket catalog of the Pacific Gas Radiator Co., including its Thermolator, a good looking streamlined warm air circulator, invented. Also a vented circulating heater, a radiant circulator, the Pacific wall heater, fireplace and bathroom heaters, gas steam radiators, both vented and unvented, and the important Pacific line of floor furnaces in four different models. Included also are the Pacific gravity furnaces, forced-air furnaces, and forced-air units together with automatic water heaters, all gas fired.—PACIFIC GAS RADIATOR CO., 1740 W. Washington Blvd., Los Angeles, Calif.

"ROUND OAK RANGES"—A complete line of gas ranges is offered in a spirally bound portfolio of 32 pages, with sizes to fit every builder's need. Eight popular models are illustrated and the special features of insulation, heat control and general construction are clearly shown.—THE ROUND OAK CO., Dept. 539, Dowagiac, Mich.

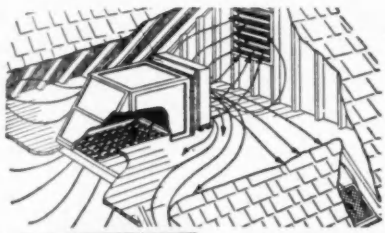
"EMBASSY FACTORY-FITTED WINDOW UNITS, CASEMENT UNITS, BASEMENT UNITS"—A 24-page data sheet illustrates and describes the complete line of Embassy factory-fitted window units. Progressive photographs show how they are installed, and clear construction details show all parts. Tables give all standard sizes. Embassy window units reach the job clean and undamaged, the sash carefully boxed and the frame bundled. Side members come with weatherstripping in place.—ROACH & MUSSER CO., Muscatine, Ia.

"GAS BURNING SUPERFEX FURNACE"—A 12-page illustrated catalog features this "24 hour air conditioning furnace." Four different sizes are offered—Models Nos. 20-E, 30-E, 40-E and 50-E.

A companion catalog of 12 pages offers three somewhat similar heating plants for oil burning.—PERFECTION STOVE CO., 7174A Platt Ave., Cleveland, O.

"MONCRIEF ARISTOCRAT COAL FIRE WINTER AIR CONDITIONERS"—A 16-page illustrated catalog presenting the streamlined cast iron furnace with motor-driven air cleaner; also a similar plant with steel heating elements. Details of the automatic controls are clearly shown.—THE HENRY FURNACE & FOUNDRY CO., Cleveland, O.

(Continued to page 120)

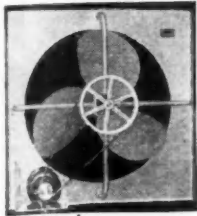


**Did You Get
Your NEW
BUILDERS'
BULLETIN**

On Summer-Comfort-Cooling?

Here is an authentic illustrated bulletin on COOLVENT ATTIC FANS and their application to new or old homes. It shows how nature's own cooling system is utilized! Points out why COOLVENT'S low cost, economical operation makes speculative homes more saleable! Whether you are interested in attic fans or not, it will pay to have this valuable bulletin in your files! Write today!

Certified Air Ratings—Member Nat'l Ass'n of Fan Mfrs.
AUTOVENT FAN & BLOWER CO.
1809-17 N. Kostner Ave., Chicago, Ill.



**SPRAY
WATERPROOFED
COLORED STUCCO**

Renew and beautify old buildings. Make new construction more permanent and attractive. Plastic Colorcrete fuses with any masonry surface. It fills all cracks. It can be applied in any thickness and in 30 colors. Fully proven by over 12 years actual use under all conditions and every climate.

OFFERS BIG EARNINGS

Owners everywhere want to enhance present values. With this machine you can supply this big waiting market with permanent Colorcrete at amazingly low cost. Operators report cost of 2c and up per sq. ft. and sell up to 7c. Some have paid for their equipment from first few jobs. Machine capacity up to 1,000 sq. ft. per hour. Get the facts. Colorcrete books tell the whole story. Write today. It may mean business independence for you.

COLORCRETE INDUSTRIES, INC.

500 Ottawa Ave., Holland, Michigan

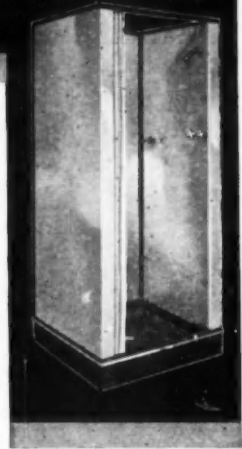


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Cabinet Showers

BUILD added sales appeal into every home you construct—large or small, simple or luxurious—by using these modern, leak proof cabinet showers. Extra baths easily possible in small space. Patented Foot-Grip. No-Slip floor of vitreous porcelain. Send now for details and specification data, without obligation.

HENRY WEIS MFG. COMPANY, INC.
601 OAK STREET, ELKHART, INDIANA



Any Handy Man Can Install

**MAKE MONEY
MEN WANTED**

Metal weatherstrip is a necessity in all buildings. Stops drafts. Saves fuel. Build your own profitable business with Accurate, the 36 year leader. No special experience required. Write for proposition.

—ACCURATE—

METAL WEATHER STRIP CO.
218 East 26th St., New York

COMPLETE
CATALOG
IN SWEET'S

FREE FOLDER
ACCURATE
METAL WEATHER STRIPS

Get the Story of

REZ

TRADE MARK REG. U.S. PAT. OFF.

I. F. LAUCKS, Inc.,

Synthetic resin sealer
—protects plywood, millwork—
saves paint—cuts finishing costs!
Seattle, Wash.; Lockport, N.Y.

**QUALITYBILT
DISAPPEARING
STAIRWAY**

Here is the modern way to get more for your building dollar. Eliminate waste attic space by installing this perfectly balanced disappearing stairway. It is strong, rigid and non-folding, easily installed in new or old buildings. Rests on attic floor when not in use; does not take up valuable space in room below. Adds many times its cost to the value of the home by providing extra storage or livable space.

Ask your lumber dealer or write us for details
Address Dept. A8639



FARLEY & LOETSCHER MFG. CO.
DUBUQUE, IOWA

MORE BUSINESS

can be done with the new Model "A"—8 full-sized machines in one—each independently operated.

Send for complete catalog.



**MODEL "A"
PLANING MILL
SPECIAL**

Rip and cross-cut saw, 22" hand saw, 12" jointer, tenoner, hollow chisel, mortiser and borer, swing cut off saw, reversible spindle shaper and sand disc.

Complete line of individual and combination machines
Good Woodworking Machines Since 1887

THE PARKS WOODWORKING MACHINE CO.
Dept. BL-6 1524 Knowlton Street Cincinnati, Ohio

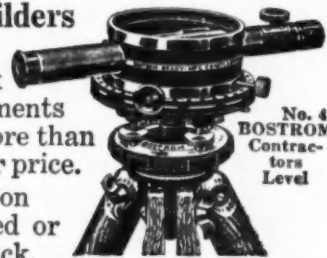
2 NEW BOSTROM LEVELS

Especially designed for Contractors and Builders

to do the same work as Instruments costing more than twice their price. Satisfaction guaranteed or money back.



No. 5 BOSTROM Convertible Level (with Compass) (when desired)



No. 4 BOSTROM Contractors Level

Write for complete literature and name of our distributor near you.

Bostrom-Brady Mfg. Co.
537 Stonewall St. ATLANTA, GA.

Fred W. Wappat

MODEL A-8" ELECTRIC HAND SAW

ONLY \$105.00

Equipped with original telescoping safety guard and convenient automatic switch. Light weight . . . Streamlined . . . perfect balance for one hand operation. Eight inch blade . . . 2 1/2" cutting capacity . . . cuts 2 1/8" lumber at a 45° angle. Extra power for faster cutting . . . cuts 2 x 10 in less than 2 seconds.

Write for Free Trial

FRED W. WAPPAT
7323 PENN AVENUE
PITTSBURGH, PA.

Note Correct Handle Placement and Perfect Balance



BEAUTIFUL STAIR RAILS

MADE TO SUIT YOUR REQUIREMENTS

WE MANUFACTURE DESIGNS SUITABLE FOR THE INTERIOR AND EXTERIOR

Also Iron & Wire Fence of every description. Swinging, Sliding and Folding Gates, Iron & Wire Window Guards, Grills, Area Gratings, etc.

Write for our latest Folder.

Send measurements.

CINCINNATI IRON FENCE CO., INC.
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MR. KEES SAYS: "FOR EXTRA GOOD-WILL, USE KEES SCREEN DOOR GUARDS!"

● Smart builders know the value of good-will. And one way to get it inexpensively is to equip screen doors with Kees Guards. They protect the wire cloth, keep it from bagging out and pulling loose. Because people push on the guard instead of on the screen. Fit any door. Improve the looks.

● Send for the Free Kees Catalog of other builders hardware and hardware specialties.

F. D. KEES MFG. CO.
Box 193 (Established 1874) Beatrice, Nebr.
Distributed Thru Wholesale Hardware Trade




You Need It - - You Expect to Get It!



Why wait? Begin now to make a profit on concrete drilling. The WODACK "DO-ALL" is the electric hammer that combines a hammer, a drill and a grinder. 3 tools in 1. Drills concrete for expansion bolts 10 to 20 times faster than with hand tools. Drills metal and wood, grinds, brushes and buffs. Greatest electric tool value. Used by leading contractors. Satisfaction guaranteed. Ask for folder and prices.



Wodack Electric Tool Corp., 4630 W. Huron St. Chicago, Illinois
Drills, Hammers, Grinders, Sanders, Buffers, Groovers

Catalogs Offered

(Continued from page 118)

"CAPITOL BOILERS AND RADIATORS"—A new loose-leaf portfolio shows the Capitol Red Top boilers for small homes and buildings in the A, B and C Series; also the Capitol Red Cap boilers, Capitol round boilers and the oil-burning boilers, U.S.-20, U.S.-25 and Capitol "OB"; Capitol gas boilers for automatic gas heating are also included. The section on radiation includes Capitol radiators, cabinet radiators, Fincast convectors, and radiator enclosures and fronts, making this a very valuable piece of reference data.—UNITED STATES RADIATOR CORP., Detroit, Mich.

"MALL PORTABLE ELECTRIC POWER TOOLS"—"Speed Up Your Work and Save Time and Labor" is the theme of a new 8-page catalog on the Mall electric hand saw with a variety of attachments, Mall electric door planes, electric door lock mortiser, and 7" heavy duty disc sander. Clear photographs and complete mechanical specifications included.—MALL TOOL CO., 7737 S. Chicago Ave., Chicago.

"DEL WARE KOLORFLOR—1939 PATTERNS"—A 60-page handbook reproducing in full color more than 50 patterns of Kolorflor rugs and Kolorflor yard goods comprising this line. Del Ware Kolorflor is described as a hard surface floor covering made of a fibrous cellulose sheet laminated to a waterproof felt back, making a durable floor surfacer resembling inlaid linoleum at a considerably lower price.—DELAWARE FLOOR PRODUCTS, Inc., 295 Fifth Ave., New York City.

"DATA ABOUT DOUGLAS FIR PLYWOOD"—A 12-page handbook by the Association experts describing Douglas fir plywood and showing how it should be used. Numerous suggested plywood joints are detailed. Plywood for inside finish as well as for structural uses is thoroughly discussed.—DOUGLAS FIR PLYWOOD ASSN., Tacoma Bldg., Tacoma, Wash.

"THE STORY OF ANNABELLE, THE CERTIGRADE COW"—A delicious piece of commercial humor—with a moral of meaning to roof builders—is presented in a little 16-page booklet; the text by Charles P. Constantine; illustrations by Errol Proctor. Don't miss this one; it is good.—RED CEDAR SHINGLE BUREAU, Seattle, Wash.

"BUILDING YOUR HOME WITH WESTERN PINES"—A 16-page brochure, well illustrated with photographs of beautiful interiors, well designed home exteriors, and some construction views; practical suggestions on using Idaho white pine, Ponderosa pine and sugar pine in good frame construction, for rough carpentry items, finish and architectural woodwork.—WESTERN PINE ASSN., Yeon Bldg., Portland, Ore.

"HOW TO AVOID MISTAKES THAT MAKE EVEN NEW HOMES OBSOLETE"—The Celotex Corp. offers 24 pages in what they refer to as "a book of fundamentals" that will make your home stay modern longer, better to live in, easier to sell. Included is a check chart against which proposed house plans and specifications can be checked to insure the correct use of up-to-date construction.—THE CELOTEX CORP., 919 N. Michigan Ave., Chicago.

"HERE'S YOUR NEW BARBER BUSINESS BUILDER!"—A bright, strong, attractive broadside and wall hanger features Barber Genasco Barb-Lock shingles, a new feature of the Barber Genasco line.—BARBER ASPHALT CORP., Barber, N.J.

"DUNBRIK DUNSTONE BUILDS BETTER BUILDINGS FOR LESS"—A new 8-page brochure presents blueprinted details of 8-inch brick walls, various combinations of Dunbrik and Dunstone 8-inch walls, Dunstone heavy duty 8-inch walls, Dunstone ashlar 12-inch walls, Korlok economy walls, and broken ashlar veneer walls. Lower costs and better quality are aimed at in this construction.—W. E. DUNN MFG. CO., Holland, Mich.

"HOW TO CUT COSTS ON SMALL HOMES"—An 8-page how-to-do-it booklet on the use of Skilsaw electric hand saws for house framing.—SKILSAW INC., 5031 Elston Ave., Chicago.