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WRITTEN SO YOU CAN UNDERSTAND IT

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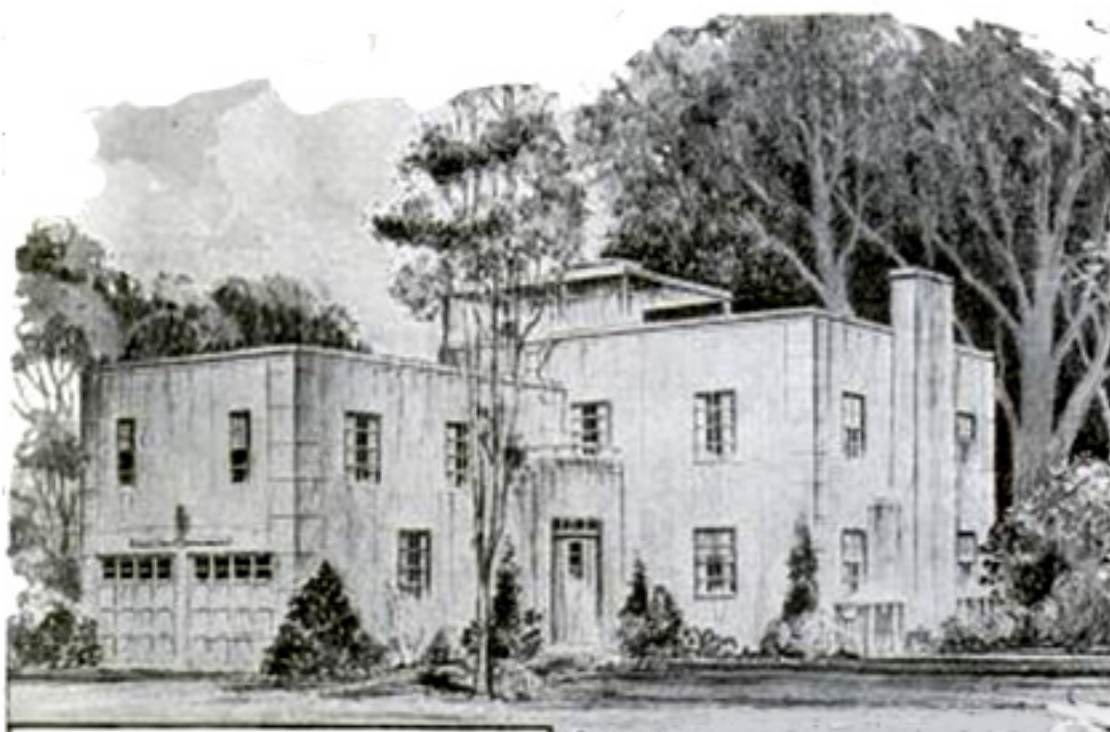
Assistant Director of Operations, Chicago Century of Progress

WHEN newlyweds a few years hence start out to buy a home, they probably will find the task as simple as purchasing a car today. After picking a location, they may go to a dealer and inspect the current models, selecting the one that suits their fancy and fits their purse. The following week, they will find the house completed and ready to occupy.

This home, however, will be entirely

different in appearance and construction from houses of today. It will be constructed almost entirely of metal or of materials new to the building industry. Its parts will be prefabricated and cut to size at the factory and it will be assembled merely by "buttoning" together the numbered sections with clips and bolts.

It will be complete in every detail, including air-conditioning system and heat-



## Your Future Home

**I**T will cost about half as much as a similar home built of materials now in use.

It will be intended to last only fifteen or twenty years.

It will be erected in a week by "buttoning" it together with clips and bolts.

It will be sold complete, with refrigerator, air-conditioning unit, washing machine, radio and other appliances installed.

Its frame will be of rustless metal, its walls—three inches thick—of enameled metal, its floors of sheet metal and it will be covered by a metal roof.

It will be virtually windowless, artificial light being furnished by ultraviolet tubing.

ing and cooling plant, electric refrigerator, washing machine, radio, and other home appliances. And it will offer, at moderate cost, more comforts and conveniences than were available in a mansion a few years ago, for it is estimated that factory methods and mass production will bring the price down to about half that of a house of the same

This Metal House, Erected in Cleveland, Gives an Idea of the Future Trend in Building

size constructed of building materials now in general use.

This ultra-modern home will be designed to last only as long as its appointments are likely to endure without becoming hopelessly out of date and obsolete. It will be built with the idea of salvaging its parts and replacing or rejuvenating it in fifteen or twenty years. This standardization does not mean that homes will look alike, for individuality can still be expressed. It does mean, however, that frames, walls, floors, interior surfaces, roofing and other parts will be factory-made in standard sizes and shapes.

In the past two years a dozen different



Two Workmen Set Up This Factory-Made Metal Home in a Single Day  
(Continued to page 138A)





Top, Left, Exterior View of Plywood House; Bottom, Left, One of the Bedrooms; Right, Kitchenette and Breakfast Room



### PLYWOOD HOUSE IS PORTABLE AND INEXPENSIVE

Constructed of plywood glued together, a portable three-room house with accommodations for four persons has been designed to meet the demand for low living costs. The house costs less than \$400. No nails are used, the plywood being held together with a waterproof glue. Double walls, mortised, tenoned and secured by iron locking devices, and floors that are screwed into position, are among the features. Assembling of the house will take only two days.





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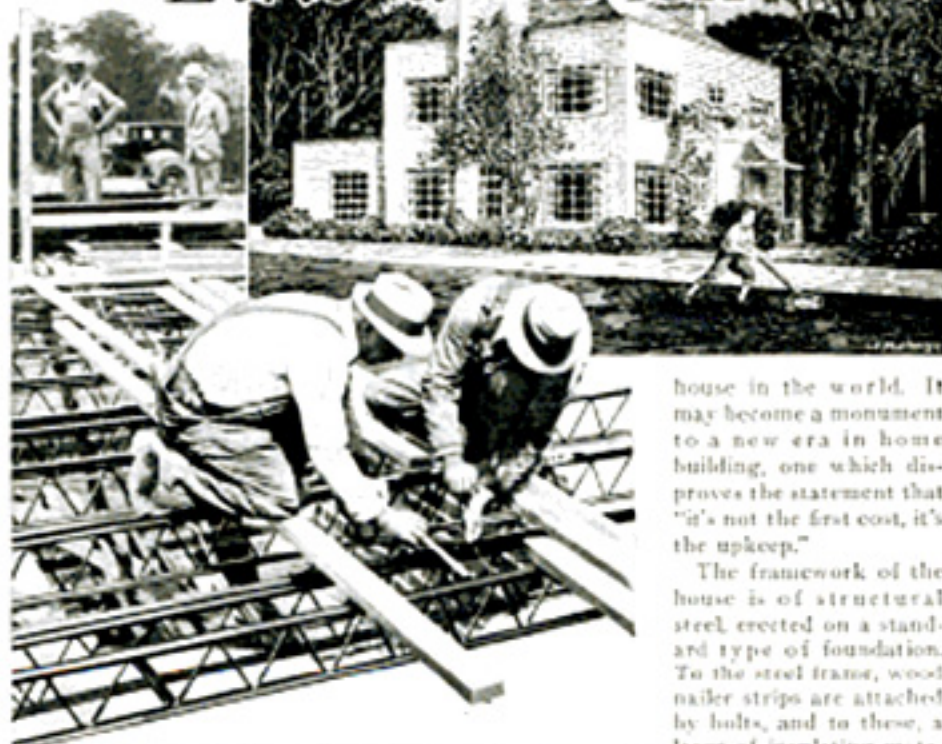
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## A House Built Like a Dish



Errecting the Framework of the Porcelain-Steel House; the Workmen Are Installing Struts to Brace the Steel Joists

PEOPLE who live in glass houses might worry about stones, but the owner of a porcelain house has no such fear, nor most of the other things that bother the average home owner.

To prove this, there has been erected in Cleveland, Ohio, the first porcelain-steel

house in the world. It may become a monument to a new era in home building, one which disproves the statement that "it's not the first cost, it's the upkeep."

The framework of the house is of structural steel, erected on a standard type of foundation. To the steel frame, wood nailer strips are attached by bolts, and to these, a layer of insulating material is nailed. This layer consists of an inch-thick

sheet of cabbarrane hbn sandwiched between steel plates. Floors are laid on steel joists, supported by steel beams and incorporating a wood nailer strip along the top edges. Windows are of the steel-case-ment type set in sheet-metal frames which are fastened directly to the structural



six by six inches of exposed porcelain surface. They are backed by a layer of asphalt-felt roodur which extends upward for about nine inches. The shingles, which come in thirty-six-inch units, are attached directly to the steel-sheathed insulation layer by means of ordinary nails passing through the asphalt felt and through holes in the metal. The asphalt felt forms an additional insulating and waterproofing layer beneath the outer wall covering. Sidewall shingles have barbs bent so that they hook beneath the asphalt strip of the layer below. This holds

the lower edges snugly against the wall. The roof shingles have no barbs.

Tests have indicated that the porcelain-steel material will withstand any degree of heat or cold that may be encountered, and that the porcelain surface is not easily dam-

steel studs. So far, the house is much like others. But from that point on, new ideas appear. The outside walls and roof are covered with porcelain-steel shingles recently developed. The porcelain layer, baked to the steel base, is practically everlasting. It is easily kept clean, and requires no periodical refinishing. The coating covers both surfaces and edges of the shingles. Any color within the range of porcelain making can be produced. The pioneer house at Cleveland has walls of a shade of buff sandstone, with a three-foot green strip about the base, and green at the top beneath the coping. The roof is in three shades of brown. The shingles each have about



Top, the Window Casements Are Made of Steel; Centre, the Structural-Steel Framework; Below, the Porcelain-Steel House Almost Completed



aged. A .22-caliber rifle bullet, fired into a shingle from a distance of ten feet, broke the enamel from a circle less than an inch in diameter, and this only where the steel base was bent inward by the force of the impact.

The porcelain idea has been carried inside the house, porcelain-enamel tile being used on the bathroom and kitchen walls and in the first-floor lavatory. On other walls, a conventional plaster finish has been employed. It is applied to plasterboard nailed to wood strips attached to the steel frame, on the walls, and to metal lath on the ceiling. Asbestos-wool insulation is used between wall surfaces.

In addition to the novel uses of porcelain, the house has several other distinctive features. It is of Georgian architecture, with a large chimney at each end. One of these is pierced by a window. In addition to its structural-steel frame, the downspouts are carried inside the walls.

By employing porcelain on all exterior surfaces, the builders believe that they have created a residence that has unusual durability. It may prove to be the pioneer "hundred-year house" of tomorrow. Already, porcelain-steel shingles have been used to a considerable extent for gasoline-station roofs, with promising results.

Because it will be possible to erect a porcelain house at a considerably lower cost than one of brick or other material of comparative durability, the new type of construction promises to become popular with the small-home owner. Although the pioneer house at Cleveland cost about \$15,000, refinement of the methods of construction will lower this amount considerably. Shingles and other parts, being made in the factory, can be turned out by mass-production methods, with resulting savings.

Originators of the porcelain shingles believe that one of the biggest fields for them is in the reconditioning of old structures. A house that shows its age and yesterday's style can have its appearance changed completely and permanently by the application of porcelain shingles directly to the weatherboarding and old roof base. A layer of insulating material can be added before application of the shingles, if desired. The cost of such a transformation will not be great.

## IRON ELEPHANT RUN BY MOTOR IMITATES REAL ANIMAL



## "Home in the Sky" Is Built Inside Skyscraper



son can create when he builds a home. It is kept furnished in an up-to-date manner and supplied with all modern conveniences. Radio broadcasts, dealing with some building or furnishing subject, are sent from the house three a week. Since it was completed, it has been inspected by some half million visitors, averaging 600 to 700 a day. The two-room log cabin was



Top, Brick, Stone and Weatherboarding Are Combined into a Pleasant Exterior; Center, Interior of the Home to the Sky, the Basement Being on the Sixteenth Floor; Right, the House as Seen from the Eighteenth Story of the Builders' Exchange

A modern six-room residence and a two-room log cabin have been erected inside the Cleveland Builders' Exchange building. The house, thirty-one by thirty-nine feet, represents the prize-winning design of an Ohio architects' competition. Its basement is on the sixteenth floor of the skyscraper and the roof extends through the eighteenth floor. The court in which the home stands is fifty-six by fifty-one feet and thirty-one feet high. Living vines and shrubs decorate the house walls and lawn area, but the "home in the sky" is not inhabited. Instead, it is maintained as a permanent example of what the average per-



added to show an ideal vacation retreat and stands amid artificial surroundings of a rustic nature.