

The Little 'Tin' Houses With an Ironclad Future

By George J. Paduda

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HOW WOULD you like to own a house that never needed to be painted, inside or out, was fireproof, invulnerable to termites and similar pests, and impervious to moisture and decay, yet was modern in design, efficient in layout, and extremely easy to clean?

A house that came with built-in kitchen cabinets, living-room bookcase, and bedroom vanity, and had plenty of storage space? A house that, for over 30 years, has lived up to all the claims made for it by its designers and builders? There are such houses, a few thousand of them, scattered throughout the Northeastern quarter of the United States. The largest concentration of them, 61, is nestled on Geiger Ridge in the Marine Base, Quantico, Va.

When they were originally built, tests indicated that the exteriors would have a life expectancy of at least a century. Today, after the 30th anniversary of their construction, a check of a substantial number indicates that their builder's claims of long life and low maintenance are proving correct. Quantico officers confirm that they require very little maintenance and say the houses are, without question, the best housing buy the base ever made.

This remarkable structure is the Lustron house, built out of metal panels with a baked-on enamel finish. Immediately after the Second World War, the house was manufactured to meet the acute housing shortage that developed as a result of the drastic cutback in single-family house construction during the war years, and the marriage-and-baby boom that followed the end of the war. It was the brainchild of Carl G. Strandlund, a Swedish-born American engineering genius.

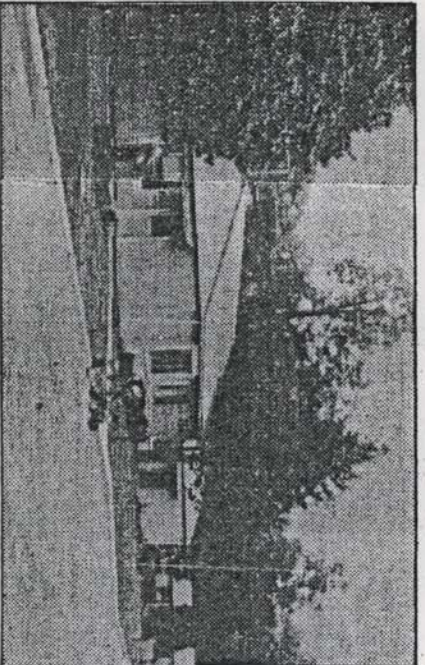
What is it like to live in a Lustron house? A study made a few years after they came on the market—aside from those at Quantico, most were bought by civilians—reported that people living in them liked them, as did people who did not live in them but were familiar with them. They were considered of good quality, and well accepted by owners and the general public. The design was considered neat and attractive, and the floor plan provided a roomy and well-arranged interior.

Thirty years later these sentiments are generally echoed along Geiger Ridge, where Marine families find their "tin" houses to be sturdy and well-built. Snug-fit-

See LUSTRON, E2; Col. 1

Washington Post 31 August 1960

Little 'Tin' Houses



Lustron houses on Ceiger Ridge are home for Marine families at Quantico.

LUSTRON, From E1
 "very comfortable," according to Jean Atkins, a Marine wife who has been living in one for 2 1/2 years. As a mother of young children, she particularly appreciates the ease with which she can clean the attractive, hard-finish interior.

Many of Jan Atkins' views are shared by her neighbors, the Ells and Teasoms. They generally find the houses comfortable, provided there is cramping to complement the radiant heat in the ceilings. The only general complaint, usually expressed in mild tones, is about the difficulty of hanging pictures and other items on the metal walls. Such praise would be welcomed by Carl Strandlund, the "father" of the Lustron house if he were alive today.

Strandlund had first come to the attention of the industrial and engineering world during the Second World War, when he developed a process for hardening armor plate for tanks that cut processing time from 14 hours to 8 seconds. This process had been of great value to the United States and its allies during the war. Strandlund also had patented a method for bonding enamel to metal.

Shortly after the end of the war, he went to Washington seeking a government allocation of scarce, federally controlled metal and other materials. He planned to build gasoline stations out of metal panels coated with vitreous enamel by means of his special process. The federal regulators said there were no materials for gasoline stations, but that there were materials for much-needed single-family houses.

Moving quickly, Strandlund contacted architect Roy Bliss of the firm of Bliss and Beckman in Whiteite, Ill. Bliss designed a compact, modern trailer to be built with steel panels coated with enamel by Strandlund's bonding process. It was simple, full of new concepts, and characterized by durability and ease of maintenance found nowhere else this side of the Pyramids.

The plans called for a two-bedroom model with 1,085 square feet of floor space, divided into a living room, dining room, kitchen, utility room, two bed-

rooms, and a porch across half of the front. Bliss also designed a similar three-bedroom model with 1,209 square feet of floor space.

The house came in any one of four colors for the roof, and any one of four other, complementary colors for the walls. The heating system was a surprise. It was by oil or gas, using radiant panels in the ceiling. These were efficient, and cut down on cleaning. As indicated earlier, there were many built-in features, such as a washer that could be used for dishes or clothes.

The plans won the approval of the Reconstruction Finance Corporation, a lending institution set up by Congress to stimulate economic progress. The RFC gave Strandlund a \$135 million loan.

A hand-made prototype was built in Hinsdale, Ill. in the fall of 1946, and, in coordination with a large advertising campaign, models were erected in the following months in Chicago, New York City, Washington, D.C., Detroit, Des Moines, Boston, St. Louis, Milwaukee, Miami and Minneapolis. Public reaction was enthusiastic. Many visitors to the models were so impressed that they offered down payments on the spot.

The model house erected in New York City, at 32nd Street and the Avenue of the Americas, drew over 30,000 visitors in the first week after it was opened in mid-April 1948. In Columbus, Ohio, where the Lustron plant was established, inquiries indicated that 15,000 houses could be sold in that area alone.

In addition to building a revolutionary house, the Lustron Corporation evolved a radically new system for the production, storage, transportation, and assembly of the new house. This involved the factory mass production of the house components, and the use of custom-made trailers for storing and transporting all 1,483 parts, exclusive of nuts and bolts, needed to erect a Lustron house.

Thus, when an order was received for a house, a trailer containing all the parts needed to build the house was towed to the building site. At the site the trailer served as a weather-proof,

house that dominates the building industry?"

Unfortunately for the people interested in buying, selling, and living in the Lustron house, it suffered from a sort of legal and financial schizophrenia. While it was "on wheels," disassembled and in its custom-made storage trailer, it was, like an automobile, then considered chattel. Not until it was dismantled and erected on a foundation did it become real estate. The financing and laws governing chattels are different from those governing real estate. This caused considerable problems in getting financing for prospective home buyers, and adversely affected the initial marketing efforts of Lustron sales agents.

Establishing a selling price proved another serious obstacle to sales. As a mass-produced item similar in many ways to an automobile, the Lustron house should, according to Padula, have been sold like an automobile: at an F.O.B. price, plus shipping and preparation charges. Instead, the same house was valued differently according to where it was erected, thus adding another burden to an already shaky marketing structure.

Once it arrived at the erection site, the Lustron house usually came up against swarms of antiquated building codes in New Jersey alone there were 621 such codes. They were written with conventionally built houses in mind. Today, many codes are based on performance, but in the late 1940s building codes went into great detail, specifying what types of material should be used for plumbing, heating, electricity, etc. Because it was a new item, built of what were then exotic materials, the Lustron house often fell prey to such standards. Thus, in part because it was so far ahead of its time, the Lustron house found itself ensnared in financial and bureaucratic red tape and controversy. In some cases the problems were caused by the Lustron Corporation itself.

The most controversial thing about the Lustron Corporation was its almost total reliance on federal financing. While Strandlund contributed his genius and valuable patents, through-

out its life the corporation relied mainly on federal loans from the Reconstruction Finance Corporation for funding.

As months passed, and Lustron was forced to cut production when marketing of the house faltered, Lustron repeatedly turned to the RFC for additional money. This brought criticism and charges of waste and inefficiency, especially from some business and congressional critics. At the beginning of 1948 Strandlund was having to deny charges of putting political pressure on the RFC to obtain additional loans. Probably the least felicitously phrased criticism was that made by a business competitor, a plumbing-supply manufacturer, who said there was a "bad odor" about the RFC loans to Lustron.

Despite projections of building 5,000 houses in 1948 and 44,400 in 1949, by the end of October 1949 the Lustron Corporation had manufactured just under 2,000 houses. Except for the 61 sold to the Navy Department for Quantico, sales were usually to individuals, often for erection in partially developed neighborhoods. By late 1949, when the company was about to go under, most of the 233 Lustron dealers were ordering an average of less than two houses per month.

In the latter part of 1949 and first part of 1950, Strandlund and the Lustron Corporation were overwhelmed by economic and political problems that had nothing to do with the value or need for the unique product they conceived and produced. A last-ditch effort by a group of Lustron dealers to save the company was an early casualty of the Korean War, when the U.S. Navy, the biggest buyer of the Lustron house, took over the Lustron plant to reconvert it to the production of military aircraft.

So, if you are looking for a well-designed, low-maintenance house, keep your eye open for a light-colored, compact rambler with a semi-gloss finish, a neat porch across half of its front, and no signs of peeling or cracking on its surfaces. There are a few thousand of them around, and, on the basis of past experience, they will be around for a long time to come.

By GEORGE PADULA for THE WASHINGTON POST

fire-proof, theft-and-vandalism-proof storehouse for the parts until the completely trained technicians. Actual erection could take from nine days to three weeks, once the building site had been prepared.

While the first models were hand-made, less than a year later the Lustron Corporation had established itself in a well-equipped plant in Millington Township, just outside of Columbus, Ohio. The plant could mass produce nearly 2,000 of the 2,334 different components needed for the house. The remaining items were readily obtainable from any building supply firm.

Ironically enough, Lustron's first efforts to get a factory, the war-surplus Dodge plant in Chicago, had been thwarted by another industrial newcomer, the newly founded and soon-to-fade Tucker Automobile Corporation. The Tucker firm, which planned to produce a truly new car with front-wheel drive, never got beyond the crating of a few hand-made models.

While Lustron engineers and planners were developing completely new methods and techniques for the mass production, distribution and erection of their new house, agents for Lustron were exploring new ways to market their unique product. At Bamberg's department store in Newark, N.J., and in Macy's in New York City, model Lustron houses, completely furnished, were offered to prospective customers.

Buyers thus had the opportunity to see at one time and in one place what their new homes would look like and cost when completely furnished to their requirements. As Arthur L. Padula, the Lustron agent who helped organize the house-with-furnishings displays, explained in a recent interview: "When a person buys a car it comes completely furnished, so why not the same with this house, whose concept and production was much closer to those of the automobile than to those of the 'stick' construction