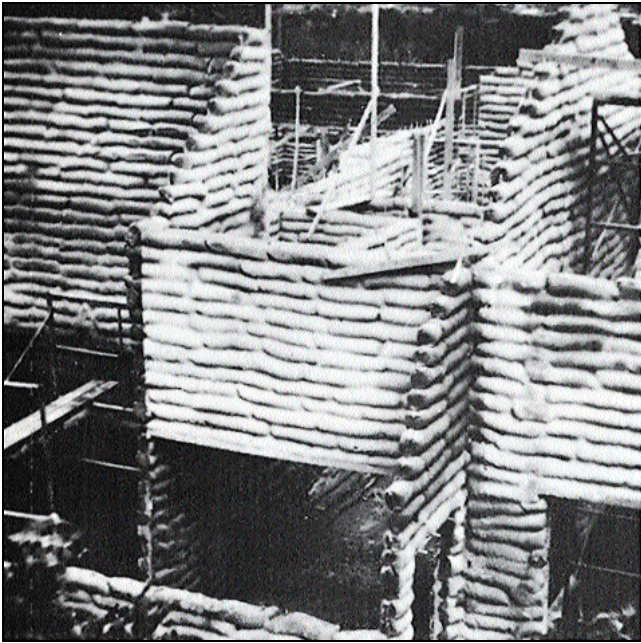


# Low-cost Housing? Maybe it's in the Bag!



In 1966 Edward T. Dicker hit upon what appeared to be the answer to a problem he'd pondered for years. The builder from Dallas, Texas, had been trying to devise a way to build truly low-cost houses of concrete.

Dicker set out immediately to develop his concept—one so simple that he sometimes wonders why nobody thought of it years before. He filled some burlap sacks with cement, sand and gravel. He wet them, tied them together by driving steel pins through them, and let them set.

Sure enough, he found, they could be used to build concrete houses, apartments or almost any other kind of structure.

"Today," he said, "we have licensees building our housing in some 30 states and a dozen foreign countries."

In this new process forty pounds of pre-batched portland cement mix are loaded into burlap bags measuring, when filled, 24 inches in length and 6 inches in diameter. The bags and contents are dipped for 10 seconds in a tub of water.

Then the bags, with open top folded over, are laid in brick-like fashion to form the wall of the structure. The bags are tied together with 10-inch steel rods.

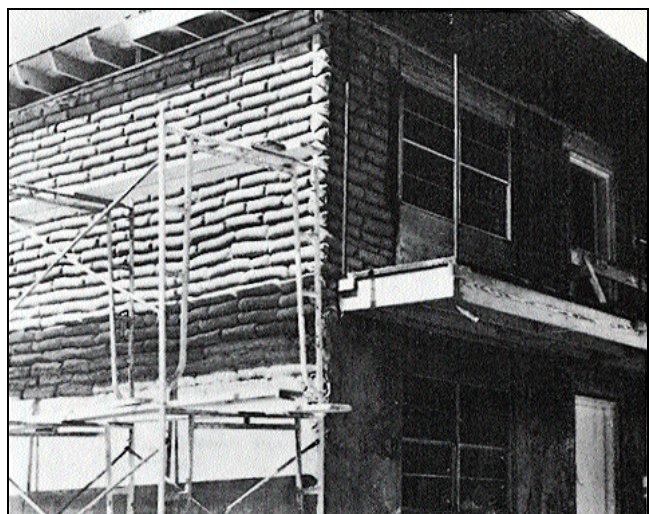
When the stacked wall is completed but still wet, cracks and junctures are filled and covered with a new layer of mortar, applied with a high-pressure gun. This is followed up with a layer of plaster providing a wall of 7 to 8 inches thick.

The roof, supported by the exterior walls, may be flat, cathedral peaked or sloped, built of wood, steel or pre-stressed concrete. Floors of the homeowner's choice complete the building.

Doors and windows are installed as the walls go up, as are the concealed electrical wires, service boxes, gas lines and telephone connections. Plumbing usually is installed before the walls are started.

Dicker points out these advantages:

- The process minimizes the requirement for expensive lumber.
- It enables the builder to provide a substantial house at a cost considerably lower than houses built using conventional procedures.
- It provides a solid masonry building without the expense and time of erecting forms.
- It requires no skilled labor, and consequently, offers a market for unskilled workers in poverty-pocket areas such as Indian reservations.
- It offers an answer to the current demand for quality low-cost housing.
- It permits generous and economical use of curves and free-form construction. Structures can be built on the side of a mountain for almost the same cost as on flat ground.



Apartments in Galveston, Texas under construction.





House under construction in Albuquerque, New Mexico.

- It provides a building that is virtually fireproof. A prototype house in Dallas, valued at \$6,000, is insured with an annual premium of \$15.33 per year under a Class A rating.
- The method permits a wide variety of exterior or interior finishes—smooth, textured, patterned or with the popular Southwest adobe effect.

Dicker, or one of the firm's several supervisors, helps licensees in their first projects to be sure they get started right.

Unlike many other inventors, Dicker had the know-how and the facilities to develop and market his concept. His first step was to put his three sons (then aged 13, 17 and 20) to work on a prototype behind the firm's offices in Dallas. None of the boys had ever built a house, but they completed the prototype in 16 days under their father's supervision.

"I just wanted to prove that the method could be used with totally untrained, unskilled labor," he said.

#### Simple and fast

After that, it's said to be simple and fast.

In Austin, Texas for instance, a licensee built in 19 working days and with six unskilled laborers a house which Dicker says probably would have taken 90 to 120 days by conventional methods.

What's more, the cost is extraordinarily low. A Norman, Oklahoma builder put up two identical houses with the same set of plans. The conventional version cost him \$8,500 while the stacked version cost \$5,400.

#### FHA approval

Dicker's new business was firmly launched in December of 1968, when his was the only really low-cost house (\$4,975) built in a federally-sponsored demonstration project at Austin, Texas. Since then the Federal Housing Administration has approved the Dicker method for FHA-insured financing. Others approving them include the International Conference of Building Officials, Southern Building Code Conference and the South African National Building Research Institute.

Licenses, sold on the basis of population, run from an initial cash payment of \$2,500 up to \$200,000. The company furnishes such equipment as a bagging machine, a concrete mixer and conveyor, and a specially designed pump for applying layers of mortar or plaster. In addition, there is a royalty of 10 cents per square foot on all construction; thus a 1,000-square foot house yields \$100 in royalties.

#### Foreign licensees

"Our people in Saipan have their first \$2 million contract for low-cost housing," Dicker said. "And our licensee in Caracas, Venezuela is getting ready to build 200 of 5,000 units. We're also going strong in the Caribbean.

"In Hawaii our licensee just got a low-cost housing award after showing our method at a housing fair. They also built a \$125,000 luxury home in Honolulu."


Dicker said he has obtained patents in about 20 foreign countries; patents are also pending in about 50 countries, including the United States and Russia.

"Our biggest problem is mortgage money, because

lending institutions prefer to service a \$40,000 house as against four \$10,000 houses," Dicker said. "That will be our hangup until Congress passes a housing bill that will fit the low-cost market."

#### More advantages

Dicker claims that his houses are so strong they'll last for 2,000 years, and that they meet every building code requirement. "They have also performed well in seismic tests," he adds. As to design, we can build a low-cost house with some flair and imagination to it rather than the rectangular box-type deal.

"Almost every country in the world has cement, sand, rock and water; it doesn't take anything special for our house. You can use the standard wood, plumbing and electrical devices of any particular country. That's why we're finding it easy to build all over the world. 

PUBLICATION #C710075

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