

## TECHNOLOGY

# Plastic for Future Houses

Scientists foresee houses of future built of plastic foam and others that bloom as flowers do. Floating agricultural fields at the earth's equator also suggested.

► THE WALLS of your house in the "blue-sky future" may be foamed into place rather than hammered and nailed, or laid by high-priced brick masons, but that day is a long way off.

This was one of several futuristic ideas presented to a conference in Washington on Plastics in Building, sponsored by The Society of the Plastics Industry, Inc., the Manufacturing Chemists' Association, Inc., and the Building Research Advisory Board of the National Academy of Sciences.

Other experts described houses that bloom like daisy buds to invite the freshness of springtime into your living room, houses built into hillsides for atomic reasons, and floating agricultural fields girdling the earth's equator in a 1,000-mile-wide belt.

Raymond F. Boyer, director of the physical research laboratory for The Dow Chemical Company of Midland, Mich., said he believes it may be possible to build houses with a plastic foam.

He pictured a device resembling a garbage can that would be the plastic "concrete mixer." It would generate foam and force it through a hose to a workman.

Using only rudimentary forms to contain the plastic until it set, the workman would build up the wall quickly. The experts would focus the radiation of a high-voltage X-ray machine or radioactive cobalt 60 on the wall to raise its structural strength by cross-linking the plastic molecules.

Mr. Boyer said he does not know just how all this is to be done in reality, but that the idea might be worth considering.

James W. Fitzgibbon, executive vice-president of Geodesics, Inc., of Raleigh, N. C., showed how geometric forms can be linked in such a way that a twist to the "roof" makes the flexible house unfold like a daisy bud.

One of his theoretical designs resembled a pyramid with a pole sticking out the top. When the pole was shoved down, the three walls of the pyramid flipped outward.

Dr. Johan A. Bjorksten, president of Bjorksten Research Laboratories of Madison, Wis., described a house his company is building. When finished, it will be 95% underground.

The cost of this house, designed for a hillside, is estimated to be less than for its equivalent above ground. Maintenance and heating costs should be far less, he said. And it will have excellent resistance to atomic shock waves.

Properly used plastic films will keep the house from becoming dank. Large picture windows jutting through the hillside will admit light to the structure.

Looking into the "blue-sky future," Dr.

Bjorksten said rapid population increases may be threatened by a limited world food supply. Since man cannot make more farm land, humanity is faced with three choices: Rigid birth control in all countries.

An atomic war "sufficiently intensive" to wipe out at least half of the earth's population.

Cultivation of the oceans.

Amplifying the last point, he said a band 500 miles on each side of the equator is almost perpetually calm and the sun shines almost every day. The temperature is "pretty steady" at 86 degrees Fahrenheit the year around.

"Development of extreme high-strength plastic films gives us a means by which it would be possible to utilize this immense belt for agricultural purposes," he said.

He described floating plastic stills, created under Department of Interior sponsorship, that convert salt water to fresh.

Fresh water from these stills could be used to cultivate plants floating in canoe-like plastic boats. He cited a man who already has such a garden plot floating in a lake.

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## DENTISTRY

## Prevent and Treat Bad Tooth Alignment

► METHODS TO prevent bad tooth alignment and to correct the faulty bite and associated troubles from this condition were reported at the American Dental Association meeting in Miami.

Habits to guard against are thumb sucking, tongue thrusting, and leaning on the arm with the hand or fist resting on the chin. This last habit may result in a whole segment of teeth being forced into a "cross-bite," Dr. Earl E. Shepard of Washington University School of Dentistry, St. Louis, warned.

In a survey of 476 children, Dr. Shepard reported, one out of every two had some form of faulty tooth alignment in the early stages.

Bad mouth habits are second only to heredity as a cause of the condition, he declared. Modern appliances to help break the habits have been developed, but these must be left in the mouth for at least six months to be effective.

Faulty bite due to improper alignment of teeth is an important cause of periodontal disease, the breakdown of gums and tissue that support the teeth, Dr. J. Lewis Blass of New York said.

The condition places unequal stress on

the teeth. It creates openings between the teeth and the gums into which food can be impacted, one of the first steps in the development of periodontal disease.

An uneven bite can frequently be corrected by grinding down high points on the biting surfaces of certain teeth. By distributing the force of the bite among all teeth, unusually heavy stresses on single teeth are relieved, Dr. Blass pointed out.

The technique known as "occlusal equilibration" also may tend to reduce decay by eliminating food impaction areas and smoothing chewing surfaces.

The teeth are not dulled. Their chewing efficiency is in fact increased by the improved contact between the teeth.

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