Solar Furnace Throws Off Great Heat

OREGON STATE COLLEGE — To obtain uncontaminated heat, chemical engineers at Oregon State College are focusing the sun's rays from 93 million miles away on a quarter-inch spot.

With this heat of more than 6,000 degrees Fahrenheit, the researcher will be able to melt boron, one of the elements used in nuclear research.

This is about the only way high temperatures can be achieved without having side reactions, according to Joseph Shulein, chemical engineering professor and project leader.

An electric arc furnace could produce the necessary temperature, but vapors from the carbon or metal electrodes would contaminate the boron.

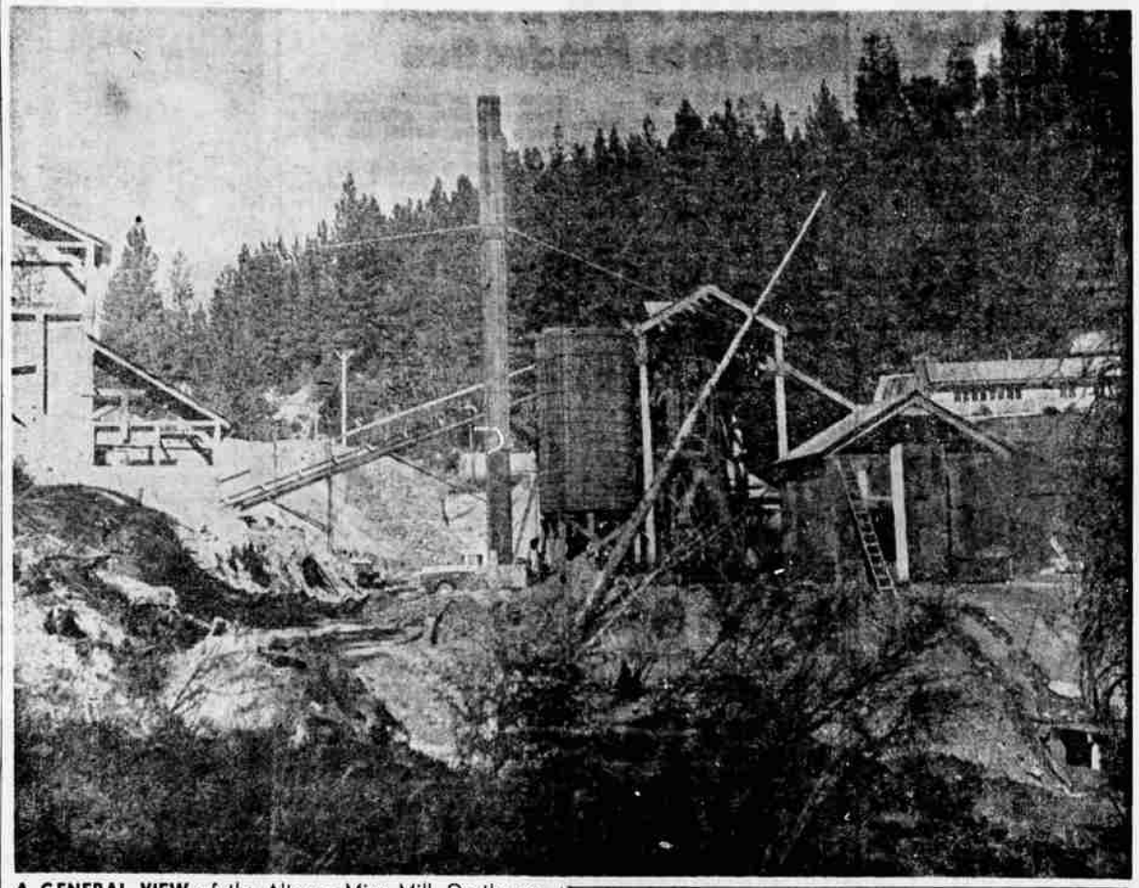
This solar furnace is on top of the chemical engineering building. It is located there so the mirrors can pick up sunlight without interference from other buildings.

A tracking mirror, seven feet square, follows the sun across the sky by using photo cells. The tracking mirror then directs the sun's energy to another seven-foot square mirror and then up to a five-foot diameter parabolic mirror which is rhodium surfaced.

In the parabolic mirror, the sun's energy falling on 49-square feet is pin-pointed to a one-quarter inch area. This makes the high temperature possible.

Working on the project are Fred Fisher, McMinnville, doctor's degree student, and Jim Bodie, Spokane, master's degree student.

Boron is a reactive element. It possesses unique properties which make some boron compounds of particular interest in high-energy fuels.



A GENERAL VIEW of the Altoona Mine Mill. On the extreme left is the crusher plant. The conveyor carries the ore to the hopper where it is force fed into the kiln. — Photo by Kite

The historic term "Thespians" for actors comes from Thespis, known as the father of Greek tragic drama.

Dream House Built For Little Cost

If you're looking for a place to get away from it all for as little money as possible, architect George Matsumoto may have the answer.

It's a little dream of a vacation cabin with livability and style you can build on virtually any site short of a downhill ski course.

Despite the limited size of this unit—it has only 432 square feet of floor space inside—there's plenty of room for a small family to live gracefully on a part-time basis. What's more, the design has been worked out in such a way that you can add one or more bunk rooms in keeping with the design for only a few hundred dollars more per unit.

Cost? You can buy the materials to build the basic cabin for about $1,500. Actual construction in the wooded hills of North Carolina proves it.

The idea originated with the editors of Woman's Day who selected Matsumoto, an award-winning young architect now teaching at North Carolina State College, for the job, because his past work demonstrates an outstanding combination of imaginative and realistic thinking.

In their August issue, the editors tell the whole story in full color from its inception on a bitter cold winter day and its birth on Matsumoto's drawing board to the actual construction.

To hold down costs, Matsumoto relied on a simple four-foot module adaptable to fir plywood. The lumber and plywood elements in the cabin are combined in such a way that there are no load-bearing partitions in the interior. All the structural members are exposed, eliminating cost, materials and construction time. With this handling they form a highly attractive visual pattern inside and out.

One of the unique features of the unit is the roof in which fir plywood panels with a highly paintable plastic-like overlay are used like giant shingles to eliminate the necessity for expensive, conventional built-up roofing.

The cabin looks larger inside because of three basic ideas—large areas of glass, a rising ceiling without a secondary low surface and elimination of all partitions except those in the bathroom.

Basic furniture is built in, saving valuable space in the living area. Sleeping facilities double in brass as both lounging platform and bed. Another built-in sofa could function as additional sleeping space.

The cabin is designed to rest on a limited number of piers which are easier to handle than continuous footings and more adaptable to varying site conditions. Diagonal bracing rising from the piers to the roof line provides structural rigidity and an unusual design pattern.

As decorated by the editors and Matsumoto, the cabin is a study in subtle color combinations with light hues in the flat wall surfaces outlined in bold dark colors on the framing.

To prove the feasibility of the project, the association financed the construction and has prepared detailed "how-to-build" plans for the project. You may obtain them for only 25 cents from two sources, Woman's Day, 19 W. 44th St., New York City or Douglas Fir Plywood Association, Tacoma 2, Washington.

THE COVER

This fall shot was taken recently at Moore Park and shows in part some of the golden glories of a High Country autumn. The children in the picture are Brad Burnum, 3-year-old son of the Paul Burnum's of 2015 Herbert, and Mary McSwain, 5-year-old daughter of the A. J. McSwain's of 2451 Corvallis.

SHOWN ABOVE IS Q. T. GIB GIBSON, salesman, and John M. Anderson, manager, of Fred E. Barnett Co., inspecting the new Esco 500 ton wire rope swaging press. The first of its kind in the Klamath Basin, the latest and safest in wire rope rigging will be available to all users within a week at the Fred E. Barnett Co., 600 Spring Street. The new press was made possible through the efforts of Mr. Anderson and is in step with the forward progress of this community.