

ASTRONOMY

Glass for Largest Telescope Disk Begins 10-Month Cooling

Pouring of Seventeen-Foot Diameter Mass Accomplished At Corning With Only Slight Mishap

LADLING out molten white hot glass, four hundred pounds at a time, like soup from some infernal caldron, workmen at the Corning Glass Works, Corning, N. Y., poured what they hope will be the world's largest telescope mirror.

Dozens of famous scientists and hundreds of other visitors, saw the twenty tons of glass poured into the seventeen foot mold in which it will cool until ten months have passed. Not until then will it be known whether the event was really successful. Despite the most careful preparations, there is always the chance that the large mass of glass may crack while it is cooling.

One mishap occurred during the pouring, but Dr. John C. Hostetter, director of research of the Corning Company, expressed the belief that it would not be serious. The mold in which the glass was poured has its bottom covered with numerous cores, making it look like a city of Eskimo snow houses. These cores were covered with molten glass in order that the finished disk will not have a solid back but a series of ridges. This permits the disk to be made much lighter than if it were solid glass and the holes formed where the cores project upwards are to be used for supporting the mirror. After about half the glass had been poured into the mold, several of the cores worked loose from their moorings on the bottom of the mold. When the doors to the fire brick "beehive" covering the mold were opened to admit more ladles of glass, they could be seen floating about on the surface of the glass inside. Dr. Hostetter said that this would not affect the success of the mirror although it was unfortunate.

As soon as the pouring was completed, the loose cores were fished out of the taffy-like mass. The whole disk will be allowed to cool without them. After cooling, this part of the glass will be solid and then holes will be drilled corresponding to the places where the cores would have been.

After the glass was poured into the mold, the entire mold was lowered on

four screws into the cellar below. Then it was moved about forty feet and lifted from below into the annealing oven. The bottom of the mold and the sides and top of the oven are lined with electrical heating elements which will be gradually turned down.

After successful cooling, the disk will be sent to Pasadena, Calif., where several years will be required to grind it to the accurate dish shape required to pick up the rays of starlight and focus them accurately fifty-five feet above. The grinding and building of the telescope will be done in the shops of the California Institute of Technology. So far the exact location of the finished telescope has not been determined, but it will doubtless be on a mountain top in southern California.

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ANATOMY

Growth Spurt Made When Right Height Reached

BOYS and girls start their adolescent spurt of growing when they have reached a certain height rather than at a certain age. This finding was reported by Dr. Carroll E. Palmer, of

the U. S. Public Health Service and the Johns Hopkins School of Hygiene and Public Health, at the meeting of the American Association of Anatomists in Philadelphia.

Dr. Palmer analyzed annual measurements made during a period of four to seven years on about 2,500 elementary school children between the ages of 6 and 14 years.

The adolescent acceleration of growth begins, apparently independent of age, when girls and boys reach an average height of 50 and 53 inches, respectively, he found. From the age of six years to the start of this adolescent growing spurt there is practically no association between the average gain in height and that height already attained by the child.

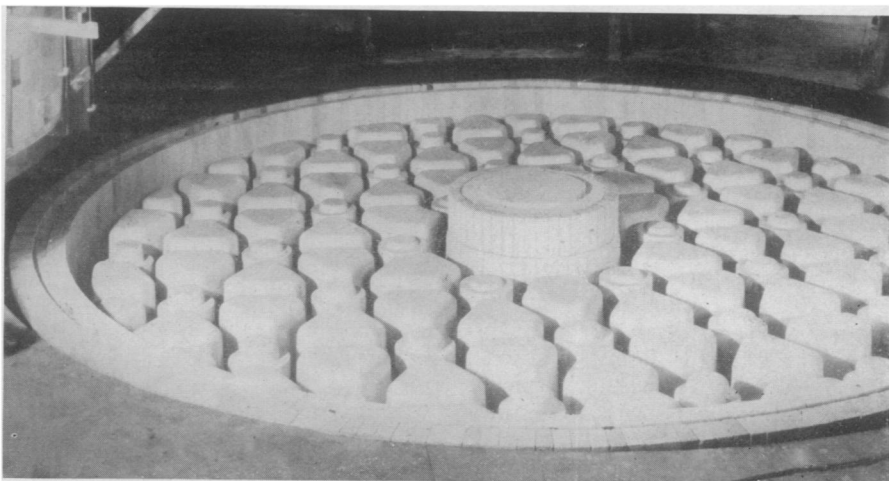
Science News Letter, March 31, 1934

GEOLOGY

Buried Hundreds of Years, Log Not Petrified

WOOD buried in travertine, the material which forms the famous hot springs terraces of Yellowstone National Park, apparently does not petrify. Dr. C. Max Bauer, park naturalist of the Yellowstone, is authority for this statement.

The park headquarters development at Mammoth Hot Springs is located on old hot springs deposits, laid down many hundreds of years ago. CWA workmen digging a trench to lay a new water main came upon the top of an old tree, eighteen inches in diameter. This was discovered three feet below the surface. Dr. Bauer states that while the exterior of the log had rotted and disappeared, the interior was remark-



READY FOR MOLTEN GLASS

The mold into which glass was poured for the world's largest telescope mirror is pictured in casting position. The "bee hive" furnace has been rolled back.