

precious metal equipment has exceeded its original cost.

Already precious metal alloys have become practically indispensable to rayon manufacturers for the making of delicate spinnerets that make the silk-like threads. These alloys could be used in other processes of the industry where "exceeding purity of product and accuracy of dimensions are essential."

Among proposed uses for precious metals and their alloys is the increased employment of platinum,—non-tarnishable at any temperature—in the making of chemical equipment, and high temperature furnaces.

"The use of platinum in chemical equipment need not be confined to very minute parts; it is quite feasible to make large vessels, tubing, etc. of the precious metal," says Mr. Carter, adding that, "there should be a wide field in chemical engineering for platinum finish, which withstands acid attack so well."

A recently proposed plan of water sterilization would use large amounts of silver and thus be of great benefit to the silver-mining Western states. Strong alkali solutions do not attack silver, Mr. Carter emphasizes, and even the fused caustic alkalies have practically no effect on silver vessels. Silver also has possibilities in the preparation of very strong solders, which replace the "soft" solders based on lead.

Gold has already proved its worth to chemistry, and for certain chemical processes the complete apparatus is made of fine gold. To overcome the softness of such mechanisms, Mr. Carter suggests the addition of platinum.

The present percentage of platinum metals, used in industries follows: jewelry, 46 per cent.; dental, 25 per cent.; chemical, 14 per cent.; electrical, 9 per cent.; miscellaneous, 6 per cent.

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ARCHAEOLOGY

Finds Freak of Nature Awed Ancient People in Canyon

BECAUSE a freak of nature set a big sun symbol high on a canyon wall, Utah Indians, about 900 A.D., worshipped the sun there with altar rites and rattlesnake dances.

This discovery is announced by Dr. Albert B. Reagan, special professor of anthropology at Brigham Young University, following an archaeological expedition to Buckhorn Canyon, Utah.

"A sluffing-off of the rock face a hundred or more feet above the valley floor outlined a circular rayed space of probably 16 feet in diameter, just about facing the noon-day sun," stated Dr. Reagan.

Fremont peoples, as Dr. Reagan calls these Indians, "were attracted in ancient days by this freak-of-nature rayed circle, and often assembled to worship the sun, thus to them represented by it. Beneath it they camped till the ashes of that long-gone time are today a foot or more thick for a distance of 200 feet along the rock wall under it. That they had altars under it and also danced to it in the narrow valley, there seems no doubt; for on the canyon walls beneath it they drew dance and other religious scenes of obeisance to it."

The drawings, Prof. Reagan reported, are almost life-size and are in striking reds, browns, and yellows. The almost continuous series is 162 feet in length

and more than twelve feet high. Fifty-one human beings are included in these representations.

"Among the figures depicted," he said, "are feathered lightning snakes, a turkey dancer showing a scene as now acted out by both the Hopi-Pueblos and the Utes, a scene like sand-painted medicine scenes now used by the Navajos, and men dancing with snakes, some of which are rattlers. A whorled-haired woman, of Hopi style, is shown. Men are dancing with winged hands, others with great streamers floating from the crowns of their heads, arms and shoulders. An eagle is flying over each of the two principal actors, while a line of llamas is shown above the other actors of the same group. The men of other groups have fleecy clouds represented as suspended from their outstretched arms in an imitation flying dance.

"The whole scene is so drawn as to show that the actors are doing obeisance to the freak-of-nature sun-disk on the rock wall above them, that they are adoring it. The drawings of the humans are all made by the Fremont pattern used by that people about 900 A.D., as found elsewhere in Utah."

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Hunters rarely see leopards because they rove chiefly at night.

ARCHAEOLOGY

Mayan Indian God Found With Mother-of-Pearl Eyes

ABURIED sanctuary of the ancient Mayas has yielded a prize statue of a god of painted body and eyes, teeth and nails of mother-of-pearl.

The discovery is reported by Mexican government archaeologists excavating in the Mayan Indian ruins of Chichen Itza, Yucatan. The sanctuary belongs to a shrine on top of a stone pyramid inside another pyramid.

When tunneling the outside structure, called the Castle by the Spaniards and the Temple of the Plumed Serpent by the Indians, the archaeologists found that it had a replica of itself inside. Like the outside pyramid, the inside one had a temple on top, and in this temple, stuffed with debris, was found the remarkable statue.

The statue is a deity in reclining pose whose likeness was first discovered by archaeologists in the nineteenth century. They called him Chacmool, Red Tiger, thinking they had found the statue of a Mayan prince so named. The Carnegie Institution of Washington discovered a Chacmool several years ago in a similar sanctuary buried in the warrior's pyramid at Chichen. But the present figure is the most interesting of all known. It still has colored stucco on it, and the mother-of-pearl incrustations are unique.

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GEOLOGY

Strife of Fire and Ice Created Crater Lake

CRATER LAKE, in the national park of that name, was born of a long contest between fire and ice, with each alternately gaining the upper hand. So Dr. Wallace W. Atwood, Jr., of Clark University, has discovered in the course of geological investigations of this famous and beautiful lake-in-a-volcano. (*Journal of Geology, Feb.-March, 1935*). The rim surrounding the lake contains alternating layers of lava and glacial material.

The story is plain. When the dying volcano was dormant, for centuries at a time, glaciers would form on its slopes, leaving the rounded and ground-up rocks characteristic of glacier action. Then would come an eruption, destroying the glaciers and depositing lava on top of their layers of "till." Then the glaciers would return again, and the cycle would be repeated.

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