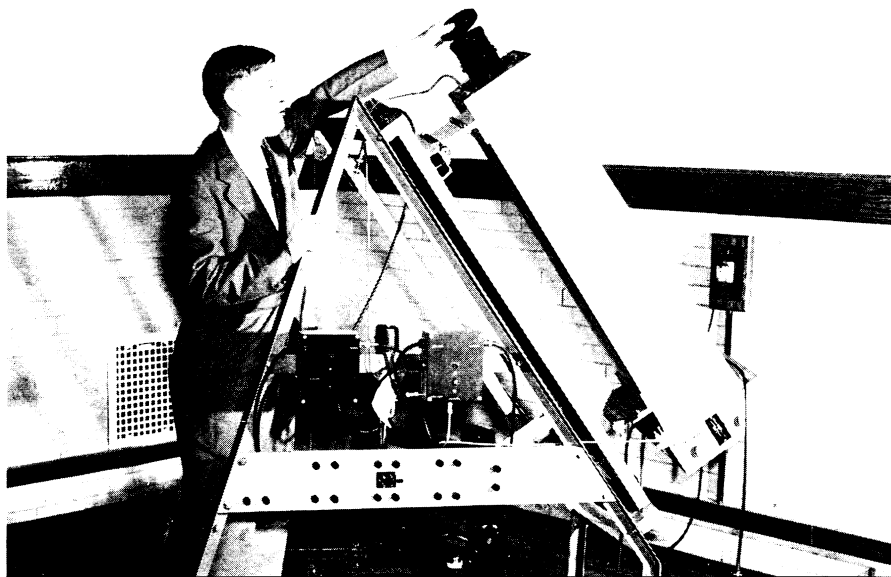


Todd used a similar idea, operated pneumatically, like the player piano. Probably because of its complexity when air-operated, it has never been used since.

Dr. Irvine C. Gardner, chief of the optical instruments section of the National Bureau of Standards, will head the party. Accompanying him are Dr. E. O. Hulbert, of the Naval Research Laboratory; the Rev. Dr. Paul A. McNally, S. J., director of the Georgetown University Observatory; Dr. Carl C. Kiess, spectroscopist, and Dr. Theodore R. Gilliland, radio research specialist of the Bureau; and Richard H. Stewart, staff photographer of the National Geographic Society.

In addition, a group from the Amateur Astronomers Association, in New York, led by Charles A. Federer, Jr., editor of the magazine *Sky*, will leave early in September for Campina Grande, Brazil, a city of about 90,000, through which the National Geographic party will pass on their way to Patos.

*Science News Letter, September 7, 1940*



TO PHOTOGRAPH THE HIDDEN SUN

Dr. Irvine C. Gardner, leader of the National Geographic Society-National Bureau of Standards Solar Eclipse Expedition, makes final adjustments to one of the specially built cameras with which the expedition will photograph the eclipse on Oct. 1. The camera will take 12 to 15 photographs of the corona, the halo that extends outward around the sun but which can be seen only during total eclipses, during the moon's five-minute blackout of the sun.

#### GEOLOGY

### Life Founded Upon Rock, Is Argument of New Book

**A**SK FOR bread, and you must first receive stones. For there can be no bread without these first being stones.

Such is the argument which opens the first chapter of a new volume, *The Rock Book*, by Dr. Carroll Lane Fenton and Dr. Mildred Adams Fenton.

Rocks, declare the Fentons, "decide what shape the earth shall have, how its outer part shall shift and what its surface shall look like. They also determine what plants and animals shall do on this planet, telling where, when and how they may live."

This claim is substantiated by rapid examples: Plants must have minerals, which can come only from dissolved, broken rocks. Animals' habitats are determined in one way or another by rocks, from the barnacle on the seashore ledge to the cony among the tumbled mountain stones. Man himself has lived successively in rock caves, stone-built castles, and apartment houses of reinforced concrete—which is an artificial stone. A modern knowledge of rocks (and their offspring, soil) is indispensable for successful farming, mining, engineering, industry of all kinds. Life indeed is founded upon rock.

*Science News Letter, September 7, 1940*

An insect "zoo" of living *pests* that damage crops was a feature of the New York State fair at Syracuse in August.

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set of records pronounced unique in American archaeology.

In Oklahoma, to take another example, Indian villages and cliff dwellings in the path of Grand River Dam are being examined while they can be, by WPA workers directed by Dr. Forrest E. Clements of the University of Oklahoma. Indians of Oklahoma are shown here as trading with tribes as far away as the Gulf of Mexico. They are also shown as skilled in cloth making and many crafts. No more than six months of exploration is expected at one area, where the work of the dam will have to proceed.

Mexico, like the United States, is keeping up its archaeological field work in

more or less usual manner, with the excavation and repair of Indian temples, pyramids, and monuments.

Rated one of the youngest sciences, archaeology has made amazing strides in the Herculean task of digging up buried history the world over, and some archaeologists think it a good thing to have a breathing spell from so much digging. Now is the time, they philosophically say, to study valuable evidence that has been unearthed and carried safely to laboratories, and to write more fully what it all means.

*Science News Letter, September 7, 1940*

Alaska bought more than \$44,000,000 worth of goods from continental United States last year—a record.

## ● RADIO

E. K. Cohan, director of engineering of the Columbia Broadcasting System, will describe the new 50,000-watt transmitter to be constructed on Long Island Sound, as guest speaker on "Adventures in Science" with Watson Davis, director of Science Service, over the coast to coast network of the Columbia Broadcasting System, Thursday, Sept. 12, 4:00 p.m. EDT, 3:00 EST, 2:00 CST, 1:00 MST, 12:00 PST.

Listen in on your local station. Listen in each Thursday.

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