

GEOPHYSICS

Paricutin Is Laboratory

Quantities of buried vegetation are being studied as "fossils in the making" because of the possible similarity between them and ancient fossils.

► PARICUTIN, the world's youngest volcano, has already been put to work in the interests of science. This fiery infant, that sprang from the soil of Mexico only a couple of years ago, has buried quantities of vegetation under the thick showers of ash it has spewed up. Because of the possible similarity between the burial of these plants and that of leaves and stems millions of years old, now found as fossils in the western United States, Prof. Erling Dorf of Harvard University has been closely studying these "fossils in the making." He reported on his preliminary findings at the meeting of the American Geophysical Union in Washington, D. C.

True fossilization, which implies mineral impregnation of the wood, has hardly begun, Prof. Dorf stated. Not all plant materials fossilize equally well, so some plants will be preserved and others will vanish.

In general, plant remains were well preserved only if buried close to their parent trees and shrubs. Preservation was better where ashes showered out of the air than where leaves were embedded in mud formed from the ash under water. Offsetting this, however, is the greater likelihood of the first kind of burials being subsequently destroyed by erosion.

Greatest likelihood of complete fossilization and subsequent preservation, Prof. Dorf thinks, will be in ash deposits subsequently covered and sealed under by flows of lava.

Science News Letter, June 9, 1945

Dam Causes Earthquakes

► SMALL local earthquakes in the neighborhood of Boulder Dam have apparently been caused by the pile-up of water in the great artificial lake thus created. No harm to the dam or its auxiliary installations is anticipated, however, Dr. Dean S. Carder, seismologist of the U. S. Coast and Geodetic Survey, who has been making a five-year study on the spot for the U. S. Reclamation Service, reassured his colleagues at the meeting.

Great care was exercised, in selecting the damsite, to locate it on the most stable geologic formations available, and to avoid all known active faults. Really ac-

tive seismic regions in Nevada are well to the north, and the parts of California where major earthquakes have occurred are far to the west and southwest.

It was only to be expected, however, that the loading of a great mass of water into a hitherto empty canyon system would cause some slight earth movements. Total weight of water in Lake Mead, when it is full to spillway height, is approximately 40 billion tons. Withdrawals for power, irrigation, and city water supplies may reduce that by as much as eight or ten billion tons in a year. Low point usually comes in April, high water in July. The little quakes which Dr. Carder has been studying are most frequent when the lake is full.

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Storms Shake Land

► THERE is literal truth in the poets' old declarations that great storms at sea make even the firm earth shake. A scientific, quantitative study of the correla-

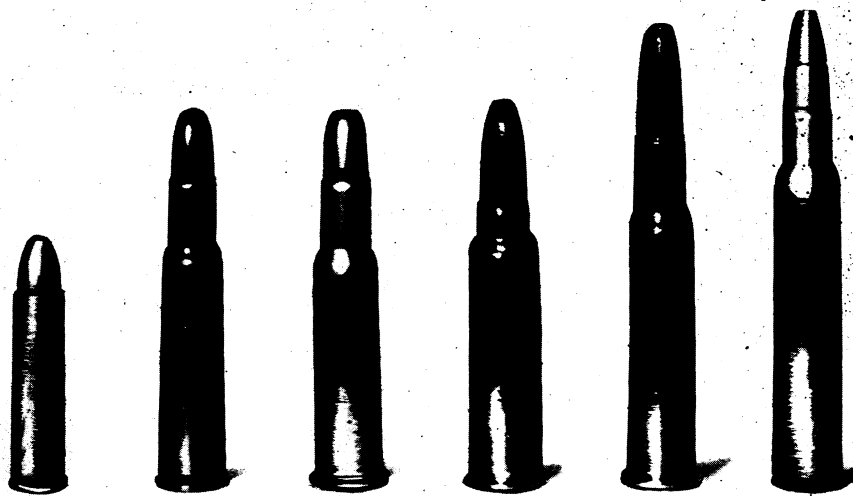
tion between sea storms and the almost imperceptible trembling of land masses known as microseisms was presented before the meeting by Leonard M. Murphy of the U. S. Coast and Geodetic Survey. Records of microseisms made at 13 stations in the United States, Alaska and Greenland, for three successive October-to-March seasons, indicated that the bigger and more intense the storm area the more marked was the earth trembling detected by the instruments, even far inland, Mr. Murphy told his audience. Storms off Newfoundland that recorded their passing on instruments in the United States failed to show up on the records of instruments in Greenland, and conversely, great storms off the Greenland coast did not register on the microseismometers in the United States.

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PHYSICS

Japanese Oxygen Mask Generates Its Own Oxygen

► A STRANGE type of oxygen mask that generates its own oxygen by electricity is part of the standard equipment of the Mikado's troops. Translations of instruction plates from an oxygen mask forwarded to the Air Technical Service Command at Wright Field reveal how the unique device works. Oxygen masks



VARY IN SIZE—These .30 caliber cartridges, pictured by the Western Cartridge Company, have only one thing in common: the diameter of all the bullets is exactly .30 inch. Everything else differs—weights of bullet and powder, length and shape of powder chamber, type of jacketing or no jacket at all. Each fits a different type of firearm. From left to right: cartridges for the Army's new carbine, Remington, Winchester and Savage sporting rifles, the Krag-Jorgensen rifle of Spanish-American War fame and the present-day M-1 (Garand) rifle.