

SEISMOLOGY

Heavy 1931 Seismic Record Brings 31 Quakes in 3 Months

Disaster at Scene of Proposed Canal Starts Controversy; Scientists Make New Instruments to Record Shocks

THIRTY-FIVE earthquakes in three months, five of them major disasters to life and property in widely scattered parts of the world, is the appalling seismic record of 1931 to the end of March. Eleven quakes recorded in January, eleven in February and thirteen in March, culminating in the catastrophe that on the thirty-first overtook the city of Managua in Nicaragua, tell the story of an abnormally trembling earth.

These thirty-five earthquakes count only the ones important enough to figure in the day's news or to trace their autographs on the ever-vigilant instruments in seismological observatories. The lesser quakes that happen every day, the mere local shocks, were not counted. The data have been gathered for the use of scientists of the U. S. Coast and Geodetic Survey by Science Service, from the stations of the Jesuit Seismological Association, from official observatories of the United States and Canadian governments, and from numerous universities.

Canal Plans Affected

Whether the recent earthquakes in Nicaragua will have the effect of wrecking the second American interoceanic canal before it is built, is a question that is bound to smolder hotly until Congress is again in session, when it will probably break out with renewed vehemence.

Such an earthquake could do immense damage to canal locks, powerhouses and other mechanical appurtenances; or, if the canal were an ocean-level one, it might slide the side of a mountain into the narrow cut.

On the other hand, a good, solid earthquake shock usually takes the mischief out of a given region, so that no more heavy shocks need be expected for a good many years to come.

Earthquakes result from the building up of a state of tension in deep rock strata; after the slip has occurred the tension is relieved and only minor shocks follow. For this reason, the re-

gion around the northwestern end of Lake Nicaragua is safer from earthquakes today than it has been at any time during a long period of years.

Earthquake Preparedness Planned

How seismologists are cooperating with engineers, architects and city planners in a program of preparedness against possible earthquakes in the United States was disclosed in a lecture recently before the Franklin Institute, given by Capt. N. H. Heck, chief of the division of terrestrial magnetism and seismology of the U. S. Coast and Geodetic Survey.

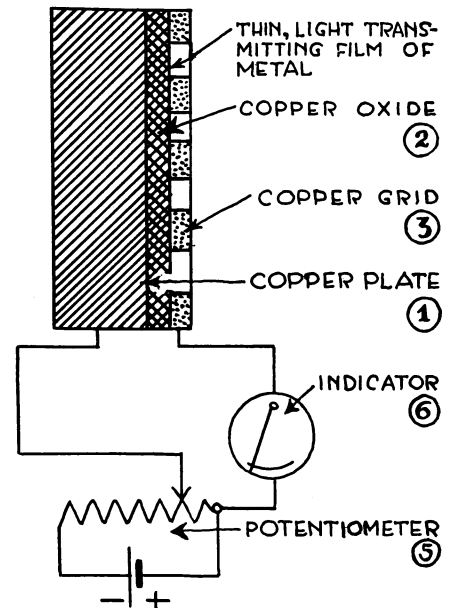
Capt. Heck stated, in part:

"Engineers are beginning to agree that major structures should be designed with regard to earthquake stress if the history of the region indicates that they are likely to be subjected to such stress. They are recognizing the lack of information and are demanding that more accurate information be obtained.

"In view of these statements, it is of particular interest that Congress in making provision for the work of the next fiscal year, has made provision for the start of this work and it should be in effective operation by the end of 1931.

"The purpose is to install instruments capable of recording accurately strong earthquake motions in places where history indicates that there is probability of earthquake activity of some intensity Instruments of a satisfactory character are not in existence today except for several types that have been developed in Japan which are adapted to frequent strong activity. In this country the Bureau of Standards, the Coast and Geodetic Survey, the Massachusetts Institute of Technology and the Earthquake Research Laboratory at Pasadena are all at work on the development of such instruments, and it is expected that satisfactory instruments, even if not of the ultimate type, will be available before the end of the present year."

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CHANGES LIGHT TO ELECTRICITY

A diagram drawn from the British patent already issued Dr. Lange which shows the construction of his copper oxide cell. The dimensions have been exaggerated for actually the layer of copper oxide is not thicker than two-thousandths of an inch, while the grid is a grating having a mesh about one to one-fifth of a millimeter wide. The copper plate and the grid form the terminals of the cell, and between them a potential of from one-tenth to two-tenths of a volt may be set up.

MEDICINE

Two Germs May Cause Blindness of Trachoma

POSSIBILITY that the later and more disastrous effects of the eye disease trachoma may be the result of two germs working together was demonstrated by Dr. Peter Olitsky of the Rockefeller Institute for Medical Research at the meeting of the American Association of Pathologists and Bacteriologists in Cleveland.

Before his death Dr. Hideyo Noguchi of the Rockefeller Institute had isolated a germ from human cases of trachoma which he believed caused the disease. This germ could produce a disease resembling the early stages of trachoma in monkeys and apes. Continuing Noguchi's work, Dr. Olitsky with his colleagues, R. E. Knutti and J. R. Tyler, have produced a disease closely resembling the later stages of trachoma, in which blindness occurs, by the action of the granulosis microbe discovered by Noguchi in conjunction with other bacteria found in eyelids.

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