

A Science Service Feature

Released on receipt
but intended for use
March 5, 1928

! WHY THE WEATHER ! Mailed February 27, 1928

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PROTECTING OIL STORAGE RESERVOIRS FROM LIGHTNING

The petroleum industry of California suffered the greatest disaster in its history in April, 1926, when a series of fires started by lightning destroyed millions of barrels of oil in storage, with losses estimated at \$20,000,000. Since that time the oil operators of the state have erected near their storage reservoirs what are probably the largest lightning rods in the world, together with other elaborate installations for averting damage by lightning.

The rods take the form of steel towers, of lattice construction, resembling radio towers. They range in height from 75 to 200 feet. Each tower terminates, as a rule, in a piece of iron pipe with pointed tip. The locations and heights of the towers are based on experiments with small models, some of which were carried out in the laboratories of the General Electric Company, at Pittsfield, Mass., and others at the California Institute of Technology.

Besides the towers, which are designed to protect the reservoirs from direct strokes of lightning, grounded wire networks have been placed over many reservoirs in order to prevent sparking from induced voltages, attending primary discharges in the vicinity. One company has adopted a novel plan, known as the "Cage system," devised by John M. Cage. The installation consists of a barbed wire strung on steel towers arranged in a circle around each reservoir. The inventor claims for this device that its multitude of points will dissipate, by corona discharge, any induced charges in the area covered and will neutralize the charge of a thundercloud overhead so as to prevent the occurrence of lightning stroke. Will it?

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