Skyscrapers as Lightning Rods

Physics

Tall buildings and lightning rods mounted on high towers protect neighboring structures from lightning, provided they are not so high as to extend out of the cone of protection. This protected area extends around the base of the high building for a distance of between two and four times its height. Imaginary lines drawn from the top of the building to the edge of the protected area define the protected cone, says F. W. Peek, Jr., in charge of the General Electric Company's high-voltage investigations.

Mr. Peek's investigations have been made with artificial lightning at pressures of as high as three and a half million volts. These man-made flashes have been used on small models of buildings. However, confirmation of his discoveries was obtained by studying a natural electrical storm that occurred in New York last summer, and during which the New York World building was struck. Though this building is close to the Woolworth Tower and is in the 1,100-foot circle around its base that is protected, the dome of the World building extends for about a hundred feet outside the cone, and that is the reason that it was struck, explains Mr. Peek. If it had been 200 feet closer the Woolworth building, it would have been protected.

Practical application of these experiments, says Mr. Peek, has already been made in California, in safeguarding oil storage tanks from lightning. Several tall rods, placed outside the big reservoirs, provide overlapping cones of protection and reduce the danger to a minimum.

Science News-Letter, May 26, 1928

Ornithevolution

Palæontology

The Archæopteryx, a primitive bird, is believed to have evolved from a reptile.

Ma Sauropod, a reptile odd,
In ages Carboniferous,
Had made her nest; had done her best;
And then became vociferous.

"Oh, Pa!" cried she, "Do come and see!
I shouldn't set, I warn you!
I hesitate to incubate
The funny eggs I've borne you!"

"Pooh, pooh!" said Pa, "What ails you Ma?
Don't tell me you're afraid
To try and hatch the little batch
Of progeny you've laid!"

"Oh, well," she hissed, "If you insist,
I'll hatch the horrid brood!"
To end the spat she sat and sat,
And hatching soon ensued.

Ma Sauropod exclaimed, "Ecod!
What's this my gaze transfixes!
I feared as much! Oh, what a clutch
Of Archæopteryxes!"

Richard Ashman.

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Instruments Record Quake

By means of records obtained on seismograph instruments at observatories as distant as Massachusetts, Alaska, Hawaii and the Philippine Islands, and gathered by Science Service, the earthquake experts of the U. S. Coast and Geodetic Survey here have located the center of the quake on Monday afternoon, May 14. It was at latitude 8.0 degrees south and longitude 80.5 degrees west, and occurred at 5 hours 14 minutes 20 seconds p. m., Eastern Standard Time. This location is in the Pacific Ocean about 70 miles off the Peruvian coast. Fortunately for residents of this region, the slip of the ocean bed which produced it was mostly in a horizontal direction. Had the shaking been up and down, a severe tidal wave would doubtless have been the result.

At Guayaquil, Ecuador, nearly four hundred miles to the north of the center of the shake, severe shaking was reported. This, and the fact that seismograph observatories at such distant points recorded it, shows that it was a quake of great severity.

The seismograph stations that reported their records of the quake to Science Service were those of the U. S. Coast and Geodetic Survey at Tucson, Arizona; Sitka, Alaska; Honolulu, T. H., and Chicago, Ill.; of the Jesuit Seismological Association at Georgetown University, Washington; Fordham University, New York; Regis College, Denver; Loyola University, New Orleans, and St. Louis University, St. Louis, and the stations of Harvard University, Cambridge; the Dominion Observatory, Ottawa, Canada, and the Manila Observatory in the Philippine Islands.

Science News-Letter, May 26, 1928

Nature Ramblings

By Frank Thone

Natural History

III Weeds

Now is the time when schools and churches and any other groups of people who have any excuse at all for getting out of doors plan picnics. And by an evil coincidence poison ivy, about the most universally distributed plant pest in America, is coming into bloom, and according to widespread opinion is at the climax of its virulence.

The plant is not hard to recognize, if you will look about a bit before spreading your picnic cloth or hanging up your hammock. It grows as a low, little branched shrub out of the ground, or climbs up the trunks of trees as a close-clinging vine, with innumerable aerial roots with which to hang onto the bark. In either case, however, its leaves are the same; compound affairs with three broadly ovate leaflets; really rather attractive things, with their glossy green shine. The flowers are slender, irregular pyramids of tiny white bloom.

It is very easy to get poisoned with poison ivy; that happens on the mildest of country walks, for poison ivy is everywhere. Poison sumac is reserved for slightly hardier souls, who go in for hiking or nature-study activities that may require wet feet, because poison sumac is a creature of the bog-edges, and does not grow in upland woods at all. This is perhaps fortunate, for though fewer persons are susceptible to it, the luckless ones it does affect get a much worse "dose", usually, than poison ivy is able to inflict.

Poison sumac is easy enough to identify. First, it is always in low ground, usually in wet ground. Second, it looks much like ordinary sumac, except that its bark is a pallid gray. Third, its fruits (which persist on their stalks for a long time) are quite unlike those of ordinary sumac, being round, white, somewhat waxy (*Turn to next page*)