PHYSICS

Warn of Lightning Hazards

Television antennas should be properly grounded and arrester should be put on lead-in. Do not walk in an open field during a storm or stand under a tree.

NOW THAT summer electrical storms are at hand, owners of television sets may well cast wary eyes at their antennas when the skies are split by jagged streaks of lightning.

Television antennas perched on house tops throughout the country may create lightning hazards unless properly grounded. Lightning striking them may crackle from the antenna mast to a nearby plumbing vent on the rooftop, possibly setting the house on fire.

Richard L. Lloyd, lightning expert at the National Bureau of Standards, said persons can ground an antenna mast by running a wire from it to a rod driven into the ground to the permanent moisture level. The recommended size for the ground wire is AWG 2 which in its stranded form makes a wire about as big as your little finger.

The ground wire should sweep around corners gently, not cut them sharply. "Lightning doesn't like to cut sharp corners," Mr. Lloyd explained. If it hits too sharp a bend, it may go straight ahead, arcing through the air to other objects and doing considerable damage.

A wire running from the antenna mast to a plumbing vent also can ground an antenna, provided the plumbing system itself offers lightning a good path to ground.

To protect the television set completely, a lightning arrester should be put on the antenna lead-in where the antenna wires enter the building. The device, available at many radio supply stores, should be properly grounded.

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Lightning protection systems can be installed to keep lightning from harming the buildings and houses it strikes. The system, composed of one or more lightning rods, is engineered so that the entire building falls within the "protective shadow" of the rods. Lightning rods also must be properly grounded.

Protecting yourself from lightning, should you be caught in a storm, is not complicated. You are safe in your car. Lightning striking the car spreads its fiery charge throughout the auto body and arcs across the wheels to ground.

If you are in an open field, seek a ditch to lie in during the storm. If no ditch is handy, just lie on the ground.

A Saskatchewan farmer reported that he saved his son, his horses and himself from being lightning-struck by means of a handy ditch.

When a storm came up, the farmer unhitched his horses from the plow and led them into the ditch. He and his son lay down with the horses. Later a brilliant lightning bolt crackled through the air and struck the plow still standing in the ground.

Lightning tends to strike the highest object in the area. Thus, if you are standing in an open field during a storm, you are in danger. If you suddenly begin to tingle all over, you are in great danger of being hit. Lie down at once.

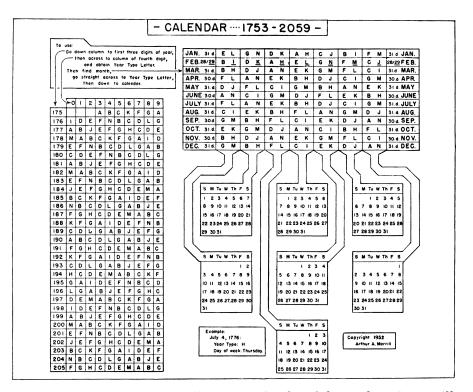
If you seek shelter under trees, you still are in danger. Lightning bolts sometimes zig-zag sideways after hitting trees, or they may flash along the ground, killing anyone in their paths.

The latest figures show that about 300 persons are killed by lightning each year. About 240 of these persons are men. That is because men are exposed to lightning more often than women.

Science News Letter, August 2, 1952

If a billion acres of otherwise fertile land in the world could be irrigated, the world's food supply could be doubled.

The *larynx* is the voice box, a hollow space in the neck guarding the outlet of the windpipe; its cartilage walls form the "Adam's apple."



PERPETUAL CALENDAR—This one is developed by Arthur A. Merrill, General Electric Company engineer. To find a date, look for the first three digits of the year in the first column of the table at left. Then under the final digit you will find a key letter. Look for this letter after the month you want, then follow down the chute to the calendar you want and you will discover on what day of the week any date fell or will fall in the future.