

Lightning Rod

The sharp point (discontinuity in geometry) of the lightning rod causes a very high local electric field. This field is high enough to ionize nearby atoms. These charge carriers separate and help neutralize the oppositely charged electrodes (the "clouds" and "ground"). So a lightning rod, through corona discharge at its point, prevents a lightning bolt by constantly spewing charge out to neutralize the clouds. Lightning rods do not attract lightning bolts; they help prevent them.

