

the schools of Italy. His electrical writings were translated not only into French but also into German (1758) and Italian (1774). Throughout Europe he stood first among electricians, as electricity, for an excited time, stood first among scientific marvels. The Swedish physicist G. W. Richmann in St. Petersburg put up an experimental rod in July 1753 and was killed—as Franklin might have been if his kite or his rod had happened to draw a heavy bolt of lightning. Kinnersley in Philadelphia in 1754 took the trouble to explain in his lectures that lightning rods were not presumptuous or irreligious. On this point there were controversies.

Wonders could not run through the world then as they can now, thanks to electricity, but Franklin's fame reached far beyond those who did or could read his books, understand his ingenious experiments, and enjoy his easy, natural expositions. He had made one of the most dramatic guesses in the history of science, and he had verified his guess with a boy's plaything. He had applied his knowledge to making men's houses, barns, ships safe from an incalculable danger. With what seemed the simplest key he had unlocked one of the darkest and most terrifying doors in the unknown universe. Here was another hero of the human race, even as against the terrifying gods. Franklin, Kant said, was a new Prometheus who had stolen fire from heaven.

In the six years between the summer of 1746, when Franklin first saw electrical experiments in Boston, and the summer of 1752, when he flew the electrical kite in Philadelphia, he made all his fundamental contributions to electricity. He made them because he had a fundamental mind, which almost at once mastered the general problem as it then existed and went deeper into it than any observer had yet gone. He found electricity a curiosity and left it a science. Indolence, he thought, disposed him too much to the building of hypotheses, and he claimed only to have been lucky in his guesses. His procedure came from the nature and method of his mind. But there was more in his science than a few bold conjectures. He steadily insisted on the need of painstaking experiments, scrupulous accuracy, and a stubborn refusal to surmise what the tested facts did not warrant. He regretted his weakness in mathematics and the frequent interruptions which broke off the chain