

Electrician

NOW that electricity has become a daily commonplace it is hard to realize what fresh, strange news it was when Franklin first thought—perhaps first heard—of it in Boston in the summer of 1746. Before that year he might have known that various bodies may be electrified by rubbing, so that they will attract lighter objects, and that the attracting force may be transferred to other bodies. He might have read of frictional machines, mounted rotating spheres of sulphur or glass, which could be used to charge insulated conductors with what was called the electric fluid. European scientists already distinguished two kinds of electricity: vitreous, produced on glass rubbed with silk, and resinous, produced on resin rubbed with wool or fur. But not until January 1746 had Pieter van Musschenbroek at Leyden discovered the electric bottle later known as the Leyden jar, the simplest and for years the only known condenser, which was the basis of early electrical research. William Watson in London quickly followed Musschenbroek in his experiments and concluded that all bodies contained electricity: uncharged bodies the normal or equilibrium amount, charged bodies more or less than that as they contained vitreous or resinous electricity, or vice versa. Franklin in the fall or winter of the year went forward from the year's chief discovery in science.

"My house," he says, "was continually full, for some time, with people who came to see these new wonders. To divide a little this encumbrance among my friends, I caused a number of similar tubes"—similar to the one Collinson had sent the Library Company—"to be blown at our glass-house, with which they furnished themselves, so that we had at length several performers."¹ Philip Syng, a member of the Junto and a skilled silversmith, contrived a

machine to simulate lightning," Franklin particularly made to a fatiguing extent through them which you tell Hopkinson, noticed that Womersley, a Boston Leyden jar covering the tubes—planting Boston, Newley's experience.

But Franklin found out, in his house in Massachusetts, a saltcellar, a kind of a bottle, "he himself,"³ he had methods. V. 28 March phenomena that at length, his contributions: his institution of vitreous and the effect of positive electrical force.

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