

Author unknown. "Regulating the Weather." *The Times-Democrat* (New Orleans, LA), September 11, 1901.

REGULATING THE WEATHER

During the prevalence of the severe hot weather, tornadoes and storms of the summer, *The Times-Democrat* suggested that, sooner or later, man would not be satisfied with taking the weather as it came, but would try to regulate and improve it; and that the time when this would be possible is not as far off as many think. Thus, in France and Switzerland, we are assured, the hailstorms which prove so destructive to the vineyard during the harvest are prevented by the use of aerial artillery. There have been many claims presented by the rainmakers; and while these have not been substantiated, the experiments are apparently in the right direction, and give us reason to hope that something may be done sooner or later in the way of breaking droughts.

For success in controlling the weather we need a better knowledge of meteorology. Great progress has been made in the study of the weather of late; but we have been studying it for only a few years, and it is scarcely possible to master all its mysteries during that short period.

Prof. Elmer [R.] Gates of Chevy Chase, Md., claims to have solved some of the big mysteries of weather. His theory is that electricity is at the bottom of all our weather changes.

Prof. Gates recently performed a remarkable set of experiments, reported in *Scientific American*, in the course of which he succeeded in making artificially, in miniature, many of the most impressive and majestic atmospheric phenomena.

It is, of course, well known to all that the weather changes are due to modification of the density of the air; for which reason barometers, giving as they do the density of the air, foretell storms and other atmospheric disturbances. Prof. Gates' first, therefore, was to show that electricity caused changes of density. He hung large and extremely fluffy balls on silk threads in a room. He then electrified the air separately with positive and negative charges. With one kind the pressure diminished and the balls increased in size. With the other the reverse happened. When two bodies of air in the room were given charges of electricity of an opposite nature, the balls approached, showing that two masses of air oppositely electrified naturally approached. Having thus demonstrated the influence of electricity on the atmospheric pressure, Prof. Gates undertook to show many weather phenomena. A miniature rainstorm was evoked as follows: Two windows on either side of the laboratory were opened. An electric fan was set in motion,

causing drafts to enter from the two windows and meet. The two air currents mingled without any manifestation, until positive and negative electric charges were passed into them. When the two oppositely electrified air currents then met, they at once formed a mist, and within a few moments the floor of the laboratory in which the experiment was given was wet with miniature rain. What Prof. Gates endeavored to prove by this experiment was that when masses of moisture laden air, heavily electrified, meet they produce showers.

Other experiments of his were in the reproduction of mists and thunder storms, the electrical character at which is recognized by all. By the use of a fan and charges of electricity a tornado on a small scale was created; and with other simple apparatus an almost perfect water spout was produced. *In fine*, with his electrical apparatus Prof. Gates was able to produce any kind of weather or meteorological phenomenon.

The theory advanced by Prof. Gates is so plausible and was so ably demonstrated by him in his experiments that it calls for more thorough investigation. It cannot be said that the theory has been proved beyond all question, but a very good beginning has been made in that direction. A recognition of the fact that electricity is responsible not only for thunder storms and tornados, but for rain, mist, water spouts and other meteorological conditions, and some understanding of the methods in which it operates will mean, now that we have so great a control over electricity and can manufacture it in such immense quantities, more or less regulation of the weather. With further practical experience we can hope in time to control it to a very considerable extent, so that, like Aeolus of old, we will “keep on tap” rain, snow, mist or drought as may be deemed best for man and the crops.