

hidden secret. Franklin's attention was called to the subject in a curious way. To weight his electrical kite, he had suspended to it, by the tail, his cook's cat. A thunder-cloud was passing at the time, and Franklin noticed the hairs of the animal's continuation separate and stand on end. This he knew was a sign of excitement, and he at once concluded that the excitement was electrical.

The results of his subsequent investigations are too well known to need reference; and the Franklin Theory of Cats is that great man's chiefest glory.

With this brief introduction, we come now to the practical elucidation of the principle upon which the Cat Battery works. Cats, according to Tyndall, are either electro-positive or electro-negative. When in the neutral state both fluids are combined, and the most sensitive galvanometer can detect no current. Thus insulated, neither A nor B exhibits either attraction or repulsion for surrounding objects, excepting for a hot stove or a piece of fish. But this affinity, according to the recent investigations of Siemens and Halske, is the result of chemical and not electrical attraction.

Now, however, let us submit electro-positive cat A, and electro-negative cat B, to exciting influences.

Instantly we observe the development of electrical energy—A being strongly positive that he is the better cat, while B is as violently negative. This, as has been proved by the experiments of Prescott, Edison and others, is due to induction; each cat trying to induce the other to believe he isn't afraid.

This electrical state of activity is accompanied by all the well-known electro-static phenomena. The hairs of each cat stand on end, and surrounding objects—such as bootjacks, soap, cough-medicine bottles and crockery—may be attracted with great velocity from distances of 100 to 250 feet.

Cats are absolute non-conductors. This fact was discovered, in 1876, by Gerritt Smith, while vainly endeavoring to conduct a cat out of the coal cellar. It might be urged, therefore, that they had high internal resistance. This is not true. The external resistance is very high, but the internal resistance is never over one Ohm ("ome," or "home," to give German, English and American terms) while in many cases it is less, and is witnessed by the fact that there are 1,317,009 ohmless cats in this city alone. But while the internal resistance is surprisingly low, the intensity is so high that by inductive influence alone two cat elements can maintain a whole neighborhood in a state of electrical excitement. The only drawback to the Cat Battery is found in the wear and tear of material, but as the supply is practically inexhaustible, the telegraph companies may find it to be the most economical in use.