

SECOND SIGHT ALONG THE WIRES.

BY THOS. MULVEY.

Spirit that lurks each form within
beckons to spirit of its kin;
Self-kindled every atom glows
And hints the future which it owes.

"See what takes place a thousand miles away! Preposterous! To man's subjugation of nature there is a limit." It is thus our self-assured man of science spoke a year ago. "Hear what is said a thousand miles away! You are a madman." Thus our fathers spoke not fifty years ago.

Yet what were the "mad visions" of yesterday are almost the realities of to-day. The self-assured scientist has been proven wrong; and seeing at indefinite but great distances is known to be within the very probable realizations of the immediate future. To the remarkable insight into the complex forces of nature possessed by Dr. Oscar Hendricksen, of Lund, Sweden, and to his years of patient industry, the revelation of the wonderful probability referred to is due.

A brief resume of the steps which have led to this fascinating discovery is not amiss. No great theory, no great invention, no great discovery announced by any great investigator to an attentive world, but has floated airily, mistily, through the minds of his predecessors, or been foreshadowed in the work of preceding generations. The "correlation of the physical forces:" the intimate relation which exists between the forces of the universe—light, heat, sound, magnetism, electricity, the attraction of gravity, etc.,—this greatest mystery of nature was vaguely anticipated by the great philosophers of the past century, but it remained for Dr. Joule, of Manchester, by his mastery of experimental research, and Helmholtz with his acute mathematical reasoning,

to demonstrate, about the middle of our own century, the actual existence of this correlation and to elevate what was but a mere speculative theory into a well recognized law. The doctrine of the correlation of the physical forces assumes, it need scarcely be explained, that all kinds or forms of phenomena are but the manifestations of a universal energy; that the forces above alluded to are but motions of the ultimate particles of matter, or of a still more rarefied form of matter designated by physicists the luminiferous ether. The existence of this medium was long the dream of philosophers. The undulatory theory of light propounded by Fresnel and Young about the beginning of this century made the dream a reality, and the subsequent experiments of scientific men have so firmly established the theory that we are now as assured of the existence of the ether as we are of the existence of the moon. In order to explain the phenomena of light Fresnel created the ocean of the universe—an ocean of ether, a fluid which exists between the ultimate particles of matter and pervades all space. It is but the variation in the rate of vibration of the ultimate particles of this medium which constitutes the difference between light of various colors and radiant heat. Electricity, magnetism, potential energy, the attraction of gravity are but different modes of motion or states of stress in this medium. The more intimate our knowledge of these forces the more markedly we see the unity of the phenomena of nature—a unity which consists "not in similarity of material composition or structure, but in the subordination of all these to similar